

# Public Utilities

Volume 57 No. 9



April 26, 1956

## RECENT TRENDS IN UTILITY FINANCING

*By Owen Ely*

« »

## The Gas Consumer's Stake in the Depletion Tax Provision

*By Russell B. Brown*

« »

## Atomic Energy and the Power Industry

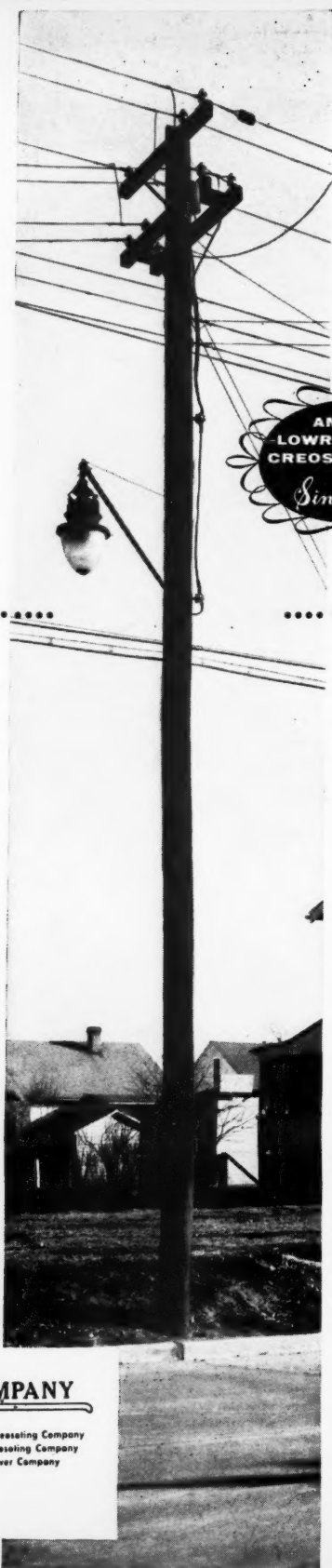
*By Franklin H. Cook*

« »

## Atom Sweepstakes

# ...Toxic Creosote

*Nature's Own Remedy  
for Longer Lasting  
Wood Products .....*



..... For over 50 years, creosote has reigned supreme as the number one wood preservative. That's because creosote, which is actually "dead coal tar," contains over 100 ingredients that are highly toxic to fungi, bacteria and all natural enemies of wood. Creosote is not just a simple laboratory compound, but a highly complex substance formulated by "nature" millions of years ago.

But effective as creosote may be, it still has to be applied properly to get maximum results. And that's where the American Creosoting Company enters the picture.

The American Creosoting Company invented and introduced the first practical commercial method of creosote treatment. That was over fifty years ago and they have been on the job ever since. Through continuous research and development, and the experience that comes only through years of service, Amcreco can guarantee you the best in treated wood products plus the service to go with it.

Amcreco's treatment plants are conveniently located for prompt domestic or export shipment. Write your nearby Amcreco sales office for estimates or quotations on your future supplies of treated poles, cross arms, conduit and other construction wood products.

## AMERICAN CREOSOTING COMPANY

INCORPORATED

Colonial Creosoting Company  
Federal Creosoting Company  
Indiana Creosoting Company



Gulf States Creosoting Company  
Georgia Creosoting Company  
Kettle River Company

Georgia Forest Products Company

GENERAL OFFICES: LOUISVILLE 2, KENTUCKY  
12 FIELD SALES OFFICES TO SERVE YOU

Editor-in-Chief • ELLSWORTH NICHOLS

Editorial Consultant • HENRY C. SPURR

Editor • FRANCIS X. WELCH

Associate Editors • RALPH S. CHILD

FRANKLIN J. TOBEY, JR.

NEIL H. DUFFY

NORMAN J. BARATT

EARLE W. PUTNAM

GEORGE E. TURNER

Assistant Editors • M. C. MCCARTHY  
M. L. WILLIAMS

Financial Editor • OWEN ELY

Advertising Manager • E. L. COOKE

Circulation Manager • E. S. STEVENS

# Public Utilities

## FORTNIGHTLY

VOLUME 57

APRIL 26, 1956

NUMBER 9



### ARTICLES

#### Recent Trends in Utility Financing ..... Owen Ely 577

Review of recent trends in utility financing and the reasons for the changing modes.

#### The Gas Consumer's Stake in the Depletion Tax Provision ..... Russell B. Brown 587

An analysis of the basis for the depletion allowance and its impact on the economics of gas-oil production.

#### Atomic Energy and the Power Industry ..... Franklin H. Cook 594

An exploration of the economics of three types of electric power generation: hydro, steam, and the atomic reactor.

### FEATURE SECTIONS

#### Washington and the Utilities ..... 601

#### Wire and Wireless Communication ..... 605

#### Financial News and Comment ..... Owen Ely 608

#### What Others Think ..... 617

Atom Sweepstakes ..... 617

Pipeline and Archaeologists—A Modern Partnership ..... 620

The Woodpecker—Utility Problem ..... 622

Does the Consumer Want Gas Producer Exemption? ..... 624

Mexicans Hear Criticism of U. S. Power Policy ..... 626

Roanoke Rapids Dam Dedication ..... 627

TVA and Its Overzealous Friends ..... 628

#### The March of Events ..... 629

#### Progress of Regulation ..... 633

#### • Pages with the Editors . 6 • Remarkable Remarks . 12

#### • Utilities Almanack .... 17 • Frontispiece ..... 18

#### • Industrial Progress .... 21 • Index to Advertisers .. 34

### PUBLIC UTILITIES REPORTS, INC., PUBLISHERS

Executive, Editorial & Advertising Offices....MUNSEY BLDG., WASHINGTON 4, D. C.  
Publication Office .....CANDLER BUILDING, BALTIMORE 2, MD.

#### Advertising Representatives:

New York 6: Robert S. Farley, 111 Broadway, CORTLAND 7-6638

Cleveland 15: Macintyre-Simpson & Woods, 1900 Euclid Avenue, CHERRY 1-1501

Chicago 1: Macintyre-Simpson & Woods, 75 E. Wacker Drive, CENTRAL 6-1715

Dallas 28: Richard Holerman, 2831 El Capitan, DAVIS 7-3630

Pacific Coast: M. D. Pugh & Associates

2721 No. Marengo Avenue, Altadena, Calif. SYCAMORE 7-2894

and  
1050 Lincoln Avenue, Palo Alto, Calif. DAVENPORT 5-4815

#### REPRINTS OF ARTICLES

(200 or more copies)

available on orders received within 30 days after publication date.

#### Address

WASHINGTON OFFICE  
for quotations.

PUBLIC UTILITIES FORTNIGHTLY . . . stands for federal and state regulation of both privately owned and operated utilities and publicly owned and operated utilities, on a fair and nondiscriminatory basis; for nondiscriminatory administration of laws; for equitable and nondiscriminatory taxation; and, in general—for the perpetuation of the free enterprise system. It is an open forum for the free expression of opinion concerning public utility regulation and allied topics. It is supported by subscription and advertising revenue; it is not the mouthpiece of any group or faction; it is not under the editorial supervision of, nor does it bear the endorsement of, any organization or association. The editors do not assume responsibility for the opinions expressed by its contributors.

Subscriptions: Address correspondence to PUBLIC UTILITIES FORTNIGHTLY, circulation department, Munsey Building, Washington 4, D. C. Allow one month for change of address.

Single copies \$1.00. Annual subscription price (26 issues a year): United States and possessions, \$15.00; Pan American countries, \$15.00; Canada, \$16.00; all other countries, \$17.50.

Entered as second-class matter April 29, 1915, under the Act of March 3, 1879, at the Post Office at Baltimore, Md., December 31, 1936. Copyrighted, 1956, by Public Utilities Reports, Inc. Printed in U. S. A.



115,000,000, KW  
Reddy Dec. 31, 1955

Reddy Dec. 31, 1954

Reddy Dec. 31, 1953

**Reddy**  
**DOES IT**  
**AGAIN!**

Reddy Kilowatt is a  
Trade Mark Figure  
used by permission  
of Reddy Kilowatt, Inc.



There's no stopping Reddy Kilowatt in his determination to more than measure up to the nation's growing power needs. In 1955 America's healthiest, strongest young man shot up a whopping 13,000,000 kilowatts in electrical generating capacity—outstripping his record performance of 1954. Now he is 115,000,000 kilowatts tall, almost *two and one-half times his size in 1945.*

Busy as he is in homes, stores, offices and factories, Reddy finds time to look ahead. Farsighted electric companies throughout the country (and in your town, too) already have charted the nation's power needs for the future and are engaged in a steady, continuing program to insure that an abundant supply of economical electricity always will be available wherever and whenever needed.

Most of the abundant, economical electrical power generated today comes from steam plants burning coal, oil and gas. A large share of this steam is supplied by B&W Boilers incorporating the latest advances in combustion and steam generating technology. As it has for nearly a century, The Babcock & Wilcox Company continues to invest in research, manufacturing facilities and engineering skills needed to keep our steam generating technology ahead of the nation's needs.

G-789



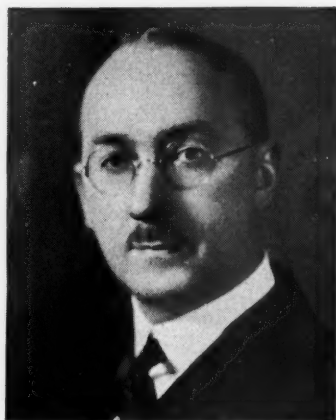
BOILER  
DIVISION

# Pages with the Editors

UTILITY financing has come a long way since the early days of doorbell ringing and neighborhood sales, and there have been a number of changes in the forms of utility financing as well as methods of promotion and distribution. Old-timers in the telephone and electric utility industry like to harken back to the days when ambitious management people would put in voluntary overtime, selling shares of fledgling companies to local subscribers and others with no more than modest funds to invest.

As a matter of fact, it was such early distribution among the conservative professional and retired people which probably laid the foundation of the reputation of Bell system securities for widely scattered small holdings attracted by cautious management policies. And that reputation, which has built such securities into one of the bluest of the "blue chips," can be traced in part to the modest beginnings of what was called, with some mixture of nostalgia and respect, the "schoolteacher's stock."

OTHER utility securities in the more recent periods of expansion in gas and electric company investment have similarly slanted towards conservative practices, so



OWEN ELY

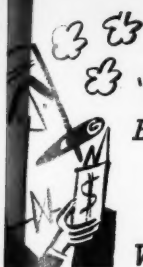
that the whole public utility list stands today on the right side of the average investor's portfolio for basic long-term commitment.

NEVERTHELESS, within the framework of public utility financing practices there have been changes which reflect new developments and varying conditions. There have been differences, too, between utility company executives on such matters as dividend policy, ratio of debt to stock, the use of convertible debentures, and other alternatives. Some utility executives have followed a definite pattern of financing over long periods of time. Others have favored greater flexibility and variation so as to be in a position to adopt new methods and give management more freedom of action.

THERE has probably been no period, however, comparable with the last decade, in which the need for constant review and occasional adjustment has been so definitely indicated. During the period which followed the cessation of hostilities of World War II, the pent-up demand for plant expansion in all branches of utility industries put unparalleled pressure on management to raise new capital. As a result, plant investment has actually doubled



RUSSELL B. BROWN



"I'm burning these ten-spots," said Hodge,  
Burning bills in his big truck garage,  
"To show how we lose,  
When a new truck we choose,  
Without first having checked on Dodge!"

## QUICK QUIZ FOR TRUCK BUYERS

Try this quick quiz before you buy your next truck—and you'll get a better truck for your money:

- Q. What truck line offers you *today's lowest prices* on such popular models as the 1½-ton panel, the 1-ton express, and the 1½- and 2-ton stakes?
- Q. Which truck line has the largest cabs?
- Q. Which has the greatest driver visibility?
- Q. Which has the shortest turning radius?

The answer is "Dodge"—leader for the last 39 years. And this year "Dodge" is the answer to virtually every question you can ask that has to do with lower cost haulage or delivery.

You'll find Dodge trucks are the best answer, too, on price. For Dodge trucks are priced so competitively that no one can beat your Dodge dealer's deal.

When time comes to buy your next truck—get the answers that will lead you straight to today's best truck value—Dodge.



# DODGE

Job Rated

# TRUCKS

WITH THE FORWARD LOOK



Get the Dodge Dealer's Deal Before You Decide

in the last ten years in some instances, and the end of volatile expansion is not in sight anywhere.

ECONOMISTS and others, who foresaw a "plateau" after the utility industries, freed of wartime restrictions, had caught up with the postwar demand, have long since discarded their more cautious curve projections.

THE leading article in this issue is a review of recent trends in utility financing, as well as an explanation for the changing modes. The author is the regular financial editor of this publication, OWEN ELY. He has written a practical, as well as informative, "wrap-up" story—with supporting statistics—of the latest approved fashions in utility financing.

\* \* \* \*

DURING the controversy over the passage and subsequent veto of legislation to exempt independent natural gas producers from FPC regulation, the question of gas-oil tax depletion allowance was raised. Although this deduction for depreciation, allowed by law on the taxable income derived from gas and oil wells, has nothing to do with FPC regulation of gas production, the dispute over the Harris-Fulbright Bill led to considerable discussion of the tax provision during congressional debate.

THE article beginning on page 587 is an analysis of the basis for the depletion allowance and its impact on the economics of gas-oil production. It is written by RUSSELL B. BROWN, general counsel of the Independent Petroleum Association of Washington, D. C. Born in Kentucky, MR. BROWN received his early education at Ardmore, Oklahoma, and studied law at the University of Chicago. After some private practice at Ardmore, he became in succession city attorney of Ardmore, United States probate attorney, and county attorney of Carter county, Oklahoma. He joined the Independent Petroleum Association in 1929 and became general counsel in 1930. During World War II he was assistant to the chairman of the Petroleum Industry War Council.



FRANKLIN H. COOK

THE article entitled "Atomic Energy and the Power Industry," beginning on page 594, is a thought-provoking article exploring the economics of three types of electric power generation: hydro, steam, and the atomic reactor. It is written by FRANKLIN H. COOK, a Pennsylvania State University professor of economics. He has endeavored in this discussion to bring into one place an analysis of what is known to date on the cost of these three types of generation. The author is concerned more with the economic facts rather than the techniques of operation or speculation concerning these alternative "fuels."

PROFESSOR COOK is a native of Vicksburg, Pennsylvania, and a graduate of Bucknell University (AB, '33), Duke University (LLB, '36), and Pennsylvania State University (AM in Economics, '40). He joined the State University faculty in 1937 and has been a full professor since 1954. He is a member of the American Economic Association, American Association of University Professors, American Business Law Association, and other professional groups interested in management and utility operations. He is the author of numerous articles in the same field.

THE next number of this magazine will be out May 10th.

*The Editors*



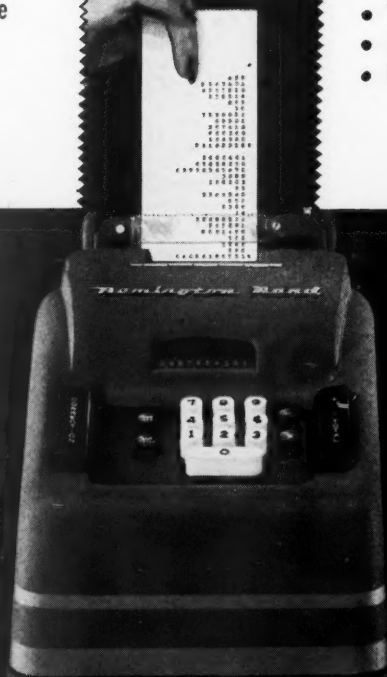


## it adds up...

There's no better adding machine than the Remington Rand All-Electric.

## *It has everything!*

- 10 key keyboard for touch control
- Two color tape for proof of accuracy
- Electrified multiplication
- Direct subtraction



**Remington Rand**  
DIVISION OF SPERRY RAND CORPORATION



# Coming IN THE NEXT ISSUE

(May 10, 1956, issue)



## **PUBLIC RELATIONS BUILD A BETTER REGULATORY CLIMATE. PART I.**

One of the problems of making our American system succeed to its fullest potential is that of public relations "maintenance," or, in plainer words, keeping the system "sold" to those who benefit from it. The once common assumption that economic facts would somehow make themselves publicly known can no longer be accepted. The author of this article gives us a good example of how utility industry's high performance and steadily reducing rates can be clearly presented. Stable rates in the face of steadily increasing inflation did not gain the public recognition for the utilities which these facts deserved. Practical understanding of economics has become blurred by propaganda charges and countercharges, leaving the utility in the middle of political spats. Robb M. Winsborough, of Middle West Service Company, undertakes, in this the first of two articles, to prepare the reader for what may be done to better the regulatory climate.

## **MANAGERIAL FREEDOM AND THE RAILROADS**

The railroad industry may well stand at the threshold of its greatest opportunities in a half-century. The economic outlook, plus the growing tendency toward possible relief of rail transport from burdensome regulation and control, may well signal a new age of rail progress. The author takes encouragement from the report of the Presidential Advisory Committee on Transport Policy and Organization, which recommended a freer program of regulation and greater reliance upon competition among transport forms. Dr. Harold Koontz, professor of business policy and administration, at the University of California in Los Angeles, and well-known transportation economist, has set down his well-considered views of what the future holds for rail management at the request of the **Fortnightly**.

## **THE OUTLOOK FOR NATURAL GAS EARNINGS**

In this article, the author scans the available financial data on some two-score natural gas companies and the general economic impact upon the gas industry in the wake of the presidential veto of the Harris-Fulbright Bill. Consideration is given to the dividend pay-out records of nearly two-dozen companies, to common stockholders over the past thirty years. Ernest R. Abrams, able New York writer on business topics, sees no disturbance to the financial positions of the natural gas companies as a result of the gas bill defeat. Quite to the contrary, traditional growth and vigor of the industry seem assured, despite storms in the political-legislative area.



**Also . . . Special financial news, digests, and interpretations of court and commission decisions, general news happenings, reviews, Washington gossip, and other features of interest to public utility regulators, companies, executives, financial experts, employees, investors, and others.**

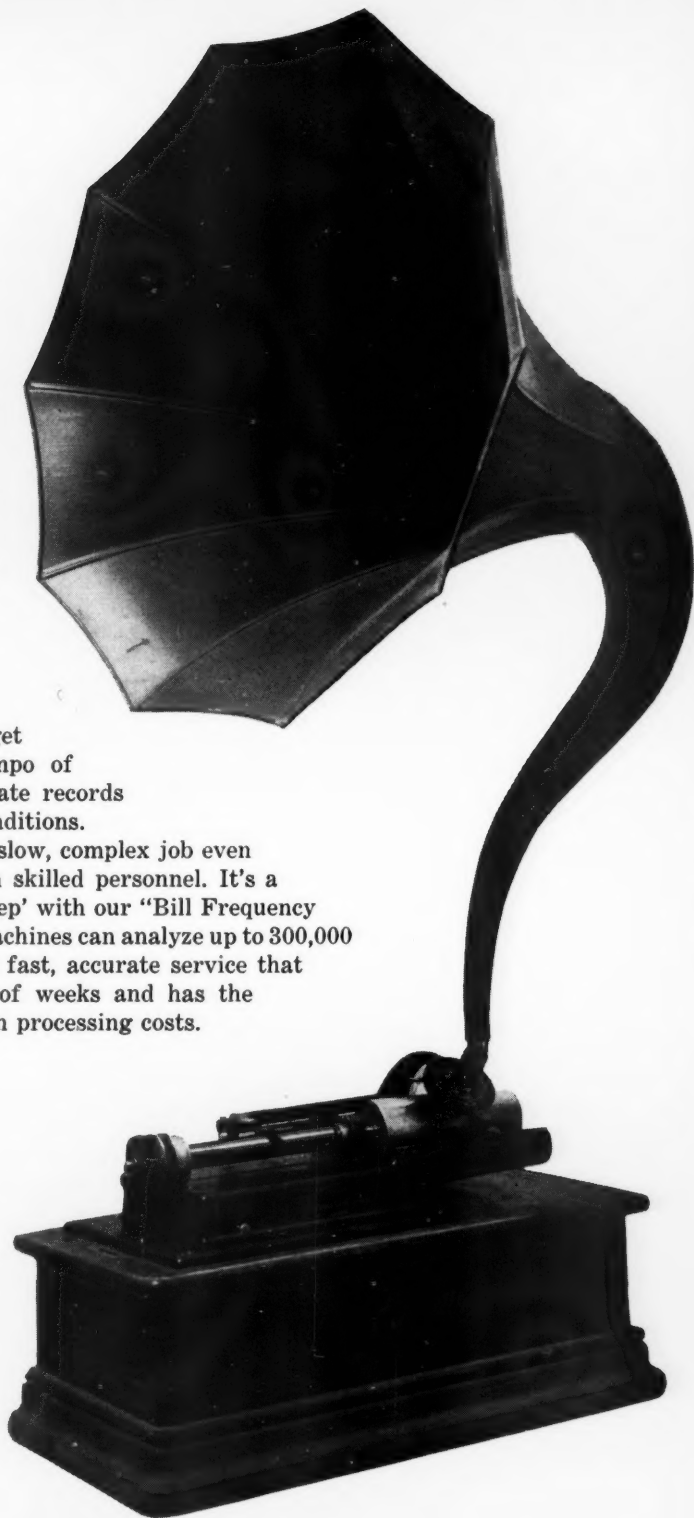
# Wind Instrument

It only played one record at a time, which had to be changed by hand and you had to wind it after every tune. This "music by muscle" machine was the marvel of its day but now it is a museum piece.

Hand compiled figures too often are "museum pieces" by the time you get them, they just can't meet the tempo of modern business that requires accurate records in a hurry to meet fast changing conditions. Case in point . . . rate analyses. It's a slow, complex job even when a utility company uses its own skilled personnel. It's a fast, simple job performed in 'One Step' with our "Bill Frequency Analyzer", because just one of these machines can analyze up to 300,000 bills in a *single* day. Investigate this fast, accurate service that gives you analyses in days instead of weeks and has the collateral benefit of saving you 50% in processing costs. *There is no obligation for estimates.*



"your key  
to better figures"



## Recording & Statistical Corporation

100 Sixth Avenue • New York 13, N. Y.

# Remarkable Remarks

*"There never was in the world two opinions alike."*

—MONTAIGNE

T. S. PETERSEN  
*President, Standard Oil  
Company of California.*

"I believe that it is in business where we are most likely to find the directors for our large governmental divisions."

CECIL B. DEMILLE  
*Film producer.*

"The stock in trade of a good public relations man is not products but ideas. He is not a salesman but a communicator."

CARROL M. SHANKS  
*President, Prudential  
Insurance Company.*

"Public opinion can change about any business unless it constantly conducts itself in the best interests of the people and in the manner expected of it."

MARVIN CHANDLER  
*President, Northern Illinois  
Gas Company.*

"A good reputation is as important to a business organization as it is to an individual. In our business it is imperative that we maintain good public and customer relations if we are to progress."

EDITORIAL STATEMENT  
*The Wall Street Journal.*

"An industry which wants no more than a comfortable home may be able to find it for a while in the federal shelter. An industry interested in making its way in the real world must look elsewhere."

WALTER P. PAEPCKE  
*Chairman of the board, Container  
Corporation of America.*

"It is not the duty of a college to give an undergraduate a thorough technical or vocational training so that he can immediately upon graduation secure the highest-paying job. That is the province of the graduate school or vocational training school."

BENJAMIN F. FAIRLESS  
*Former chairman of the board,  
United States Steel Corporation.*

"What the development of atomic energy will mean in the world of metallurgy, no one knows, as yet. But it is already apparent that the production of chemicals for plastics, synthetics, and other uses will become an increasingly important part of our activities."

CRAWFORD H. GREENEWALT  
*President, E. I. du Pont de  
Nemours & Company.*

"... it is the state of our business system that is the principal basis for our national well-being, and in this country our business system includes almost every citizen. Those who sometimes refer to business as a 'special interest' seem to forget that in an industrial economy business prosperity means prosperity to everyone."

NORMAN CHANDLER  
*President, The Times-Mirror  
Company, Los Angeles, California.*

"Here in a free country there is a freedom of the individual to live, believe, and work as he sees fit. Here is freedom of business—to plan, operate, invest, and expand as it deems wise. Freedom is our most precious heritage. We must never lose it. Within the Times-Mirror Company as a business and as individuals, we have inherited, earned, and maintained our rights under freedom."



## He's coming to help you

He is a Bell System communications engineer. His purpose is to help you speed your operations, cut your costs and improve your service—by making sure your communications meet your exact requirements.

The Bell System offers a wide variety of private line services, including telephone, teletypewriter and mobile radio systems. And the Bell System tailors these facilities to meet specific individual needs, so that you maintain high-speed contact between your various departments, branches, factories, warehouses, as well as

between you and your suppliers, customers, distributors and shippers.

Why not let a Bell System communications engineer make a study of your communications requirements and recommend the kind of service, or a combination of services, which will best meet your specific needs?

• • •

His survey is free and his recommendations are yours without obligation. You can reach him by calling your nearest Bell Telephone business office.

**BELL TELEPHONE SYSTEM**

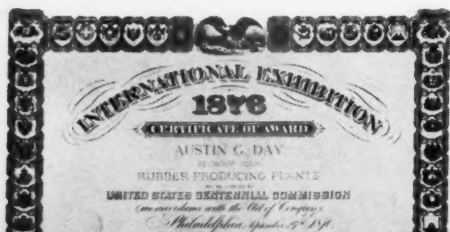


TELEPHONE

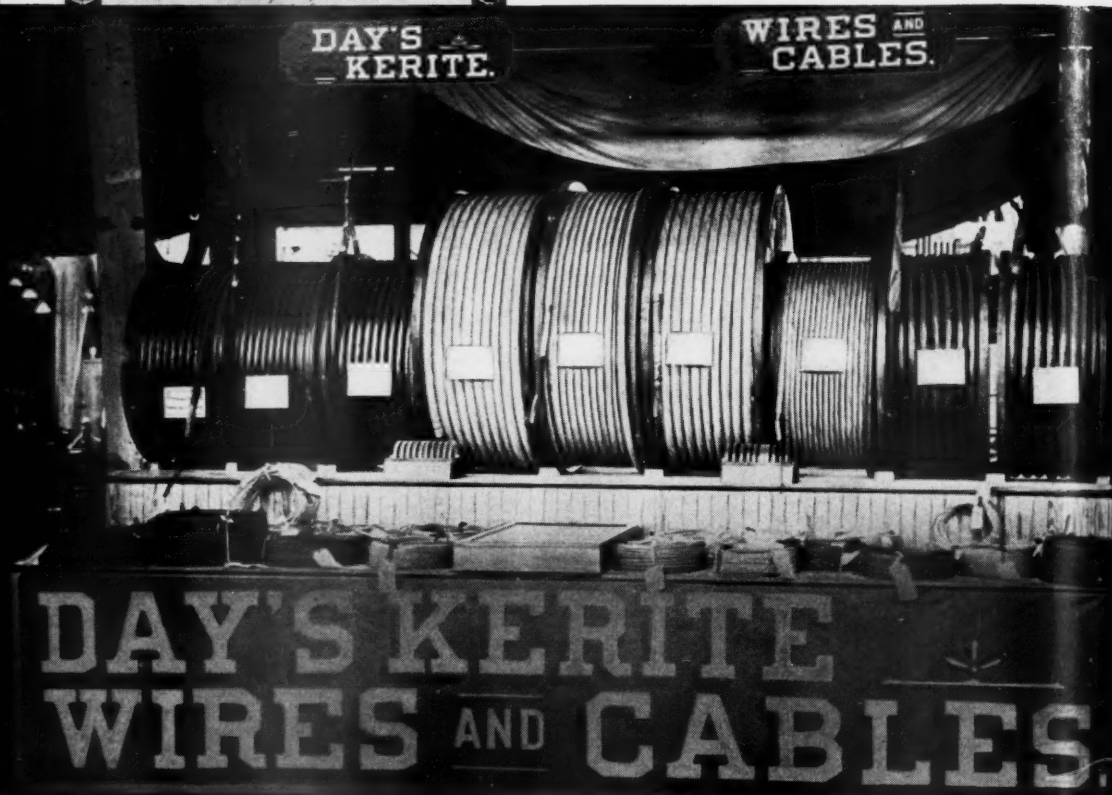
TELETYPEWRITER

TELEMETERING AND REMOTE CONTROL CHANNELS

The Kerite insulated cable and wire exhibited at the International Centennial Exposition of 1876, received a certificate of award from the United States Centennial Commission, dated September 27, 1876. It is interesting to note that the telephone and multiple telegraph of Dr. Alexander Graham Bell were also exhibited at this exposition.



# Quality



The quality of Kerite insulation had received world-wide recognition as early as 1876 and has been reflected in its enduring performance under the most adverse conditions. There is only one grade of Kerite insulation—the best.

*The value and service life of a product can be no greater than the integrity and craftsmanship of its maker.*



## KERITE CABLE

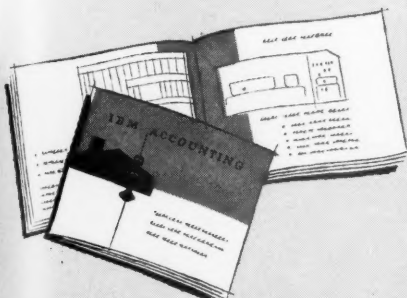
THE KERITE COMPANY—30 Church St., New York 7, N. Y.  
 Offices also at 122 S. Michigan Ave., Chicago; 582 Market St., San Francisco;  
 3901 San Fernando Rd., Glendale 4, Calif.; 31 St. James Ave., Boston



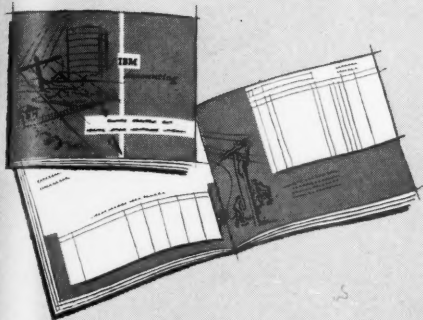
A COST-FREE WAY TO DISCOVER

# 40 WAYS Public Utilities can get added profits from IBM Accounting

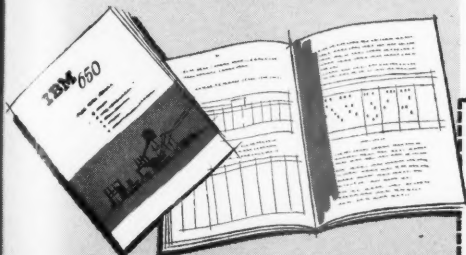
## 3 NEW GUIDES ... FROM IBM



1. **Customer Accounting.** This 24-page booklet outlines the Customer Accounting procedure from initial application for service to accounts receivable statements.



2. **General Accounting.** This 44-page booklet is a guide to the IBM punched card documents and the machine reports you can get in such fields as: Property Accounting, Construction Accounting, Payroll (including check preparation and payroll tax reports), Operating Ledgers, and Electronic Data Processing.



3. **Electronic Data Processing.** This 16-page booklet describes the application of the IBM 650 to Customer Accounting operations, including an IBM 650 schematic program for Bill Calculation and Statistics.

Here are 40 opportunities for improving Public Utility accounting through IBM data processing. Several of these applications are actually by-products of other jobs. Many of them can be accomplished on present equipment . . . in *addition* to your current applications.

Now is the time to determine whether *your* machine accounting system is adequate for the increasing demands on your company. For today's new machines and improved applications hold the answer to a broader and even *more* profitable use of IBM methods.

The three folders offered here tell the complete story. With them you can decide for yourself *exactly* how and where you can start cutting costs . . . and giving even better customer service.

*Send for your copies today—without obligation, of course.*

## Check list of 40 IBM data processing applications for electric, gas and water utilities

Use this list for a quick review of current applications. If you want to get even more from present equipment, or need further information on a *particular* application, just check off your area of interest . . . and send this list in with your coupon.

- |  |  |
|--|--|
| <input type="checkbox"/> Customer Billing                | <input type="checkbox"/> Stores Accounting                       |
| <input type="checkbox"/> Revenue Accounting              | <input type="checkbox"/> Physical Inventory                      |
| <input type="checkbox"/> Sales Analyses                  | <input type="checkbox"/> Purchase Analyses                       |
| <input type="checkbox"/> Rate Studies                    | <input type="checkbox"/> Fuel Records                            |
| <input type="checkbox"/> Government Tax Reports          | <input type="checkbox"/> Transportation Accounting               |
| <input type="checkbox"/> Merchandise Billing             | <input type="checkbox"/> Accounts Payable Accounting             |
| <input type="checkbox"/> Merchandise Accounting          | <input type="checkbox"/> Expense Distribution                    |
| <input type="checkbox"/> Customer Accounts Receivable    | <input type="checkbox"/> Budget Reports                          |
| <input type="checkbox"/> Accounts Receivable Control     | <input type="checkbox"/> Operating Reports                       |
| <input type="checkbox"/> Collection Records              | <input type="checkbox"/> Financial Reports                       |
| <input type="checkbox"/> Security Deposit Records        | <input type="checkbox"/> Functional or Responsibility Accounting |
| <input type="checkbox"/> Market Surveys                  | <input type="checkbox"/> Insurance Records                       |
| <input type="checkbox"/> Meter Control Records           | <input type="checkbox"/> Engineering Studies                     |
| <input type="checkbox"/> Meter Test Records              | <input type="checkbox"/> Construction and Retirement Accounting  |
| <input type="checkbox"/> Payroll Accounting              | <input type="checkbox"/> Continuing Property Records             |
| <input type="checkbox"/> Pay Checks and Earnings Records | <input type="checkbox"/> Operating Ledgers                       |
| <input type="checkbox"/> Pension Records                 | <input type="checkbox"/> General Ledgers                         |
| <input type="checkbox"/> Wage Studies                    | <input type="checkbox"/> Stockholders Records                    |
| <input type="checkbox"/> Personnel Statistics            | <input type="checkbox"/> Dividend Checks and Proxies             |
| <input type="checkbox"/> Accident Records                |  |
| <input type="checkbox"/> Savings and Loan Accounting     |  |

**IBM**

**DATA  
PROCESSING**

- DATA PROCESSING
- ELECTRIC TYPEWRITER
- TIME EQUIPMENT
- MILITARY PRODUCTS

### PUBLIC UTILITIES DEPARTMENT A56

International Business Machines Corporation  
590 Madison Avenue, New York 22, N. Y.

Please send my **FREE** copy of:

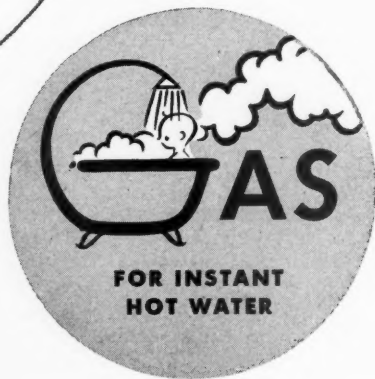
- ☐ IBM Customer Accounting      ☐ IBM General Accounting  
☐ IBM 650 Electronic Data Processing

Name

Company

Street

City  Zone  State



© The Columbia Gas System



**Columbia Gas System**  
delivers a modern miracle  
24 Hours-A-Day!

**CHARLESTON GROUP:** United Fuel Gas Company, Atlantic Seaboard Corporation, Amere Gas Utilities Company, Virginia Gas Distribution Corporation, Big Marsh Oil Company, Central Kentucky Natural Gas Company; **COLUMBUS GROUP:** The Ohio Fuel Gas Company; **PITTSBURGH GROUP:** The Manufacturers Light and Heat Company, Binghamton Gas Works, Cumberland and Allegheny Gas Company, Home Gas Company, The Keystone Gas Company, Inc., Natural Gas Company of West Virginia; **OIL GROUP:** The Preston Oil Company.

# UTILITIES

## *A.l.m.a.n.a.c.k*

### APRIL-MAY

<b>Thursday—26</b> <i>Virginia Polytechnic Institute begins annual engineering conference, Blacksburg, Va.</i>	<b>Friday—27</b> <i>Southeastern Gas Association begins supervisor training round-table conference, Charlotte, N. C.</i>	<b>Saturday—28</b> <i>American Water Works Association, Pacific Northwest Section, ends annual meeting, Victoria, British Columbia, Canada.</i>	<b>Sunday—29</b> <i>Rocky Mountain Electrical League begins annual spring meeting, Denver, Colo.</i>
<b>Monday—30</b> <i>Chamber of Commerce of the United States begins annual meeting, Washington, D. C.</i>	<b>MAY Tuesday—1</b> <i>American Gas Association will hold engineering and manufactured gas production conference, Philadelphia, Pa. May 16-18. Advance notice.</i>	<b>Wednesday—2</b> <i>American Institute of Electrical Engineers, North Eastern District, begins meeting, Rochester, N. Y.</i> 	<b>Thursday—3</b> <i>National Farm Electrification Conference begins, Chicago, Ill.</i>
<b>Friday—4</b> <i>National Association of Railroad and Utilities Commissioners, Executive Committee, begins meeting, Minneapolis, Minn.</i>	<b>Saturday—5</b> <i>Pennsylvania Gas Association will hold meeting, Pocomo Manor, Pa. May 22-24. Advance notice.</i>	<b>Sunday—6</b> <i>American Water Works Association begins diamond jubilee conference, St. Louis, Mo.</i>	<b>Monday—7</b> <i>Air-conditioning and Refrigeration Institute begins annual meeting, Hot Springs, Va.</i>
<b>Tuesday—8</b> <i>American Gas Association, Residential Gas Section, ends eastern gas sales conference, New York, N. Y.</i>	<b>Wednesday—9</b> <i>Indiana Telephone Association begins annual convention, Indianapolis, Ind.</i>	<b>Thursday—10</b> <i>Atomic Industrial Forum, Inc., begins meeting, San Antonio, Tex.</i> 	<b>Friday—11</b> <i>Pennsylvania Electric Association, Transmission and Distribution Committee, ends 2-day spring meeting, Skytop, Pa.</i>



*Courtesy, Wisconsin Public Service Corporation*

**Hydro Plant on the Wisconsin**  
*Petenwell dam—part of an investor-owned system harnessing the river.*

# Public Utilities

## FORTNIGHTLY

VOL. 57, No. 9



APRIL 26, 1956

## Recent Trends in Utility Financing

Is the character of public utility financing changing in form or objective? What are some of the factors influencing current offerings and what is the outlook?

By OWEN ELY\*

**L**AST year established a record for new corporate security flotations of all kinds, with a total of about \$10.5 billion, an increase of 10 per cent over the previous year. However, this was due to a sharp rise in nonutility financing. Utility offerings were only about 35 per cent of the year's total compared with some 47 per cent in the two preceding years. The \$328,000,000 common stock sold by General Motors accounted for much of the increase in industrial issues, while in the utility division American Telephone and

Telegraph's \$637,000,000 convertible debentures were an important factor. Total common stock offerings accounted for \$2.2 billion, the largest total since 1929 and 80 per cent more than in 1954. The utility companies contributed only about one-fifth of this total, although their equity offerings were somewhat in excess of the 1954 figure.

**I**N 1955 utility financing of all kinds totaled \$3,652,000,000, compared with \$4,087,000,000 in 1954, according to the compilation prepared by Ebasco Services

\*Financial editor, PUBLIC UTILITIES FORTNIGHTLY.



## PUBLIC UTILITIES FORTNIGHTLY

Incorporated. By subdivisions of the industry, changes were as follows:

	1955	1954	Per Cent Increase
Electric .....	\$1,497	\$2,273	D34%
Gas .....	991	1,138	D13
Telephone .....	1,105*	646	71
Other .....	59	30	97
Totals .....	\$3,652	\$4,087	D11%

\*Without the American Telephone and Telegraph convertible debentures there would have been a decline in the telephone figure of 26 per cent.

THE decline in electric and gas utility security offerings appeared due to (1) a sharp decrease in the amount of refunding operations, (2) market irregularities, and (3) a tendency toward greater use of bank loans. The dip in *new-money* financing (about 20 per cent for electric utilities, partly offset by a 10 per cent gain for gas utilities) did not reflect any substantial change in construction programs. Total U. S. generating capacity during 1955 increased about 12,000,000 kilowatts compared with a gain of 11,000,000 in the previous year. As of November 30, 1955, gross electric utility plant showed a gain of \$2,377,000,000 over the corresponding figure a year previous, while the November, 1954, figure showed almost an identical gain over the figure of November, 1953.

Outside of the telephone debentures, there was comparatively little resort to convertible issues during 1955. Those in the table below were offered publicly.

There are three principal ways of selling utility securities, with numerous subdivisions — sales by subscription rights, direct sales to the public, and "private" sales to institutions. Some utility executives seem to adopt a definite policy or pattern for their financing, then continue to follow it for some years; in other cases there may be greater flexibility and adoption of new methods. In general, the problem is how to sell securities at the lowest net cost to the company, considering (1) the net yield (after all costs, both underwriting and incidental) for senior securities, and (2) the successful sale of common stock at the best possible net price after compensating "finders," underwriters, and dealers and paying all incidental costs.

SINCE the market price of the common stock fluctuates much more than the prices of the senior securities, it is necessary (in gauging over-all cost of equity financing) also to take into account price deterioration from the time the financing is announced until the issue is completely sold. Thus to find real cost this deterioration must be added to, or taken into consideration along with, the normal discount reflecting either the subscription price less underwriting cost, or the net proceeds from underwriters in the case of a regular offering. In both cases miscellaneous

	Million
2/17 Central Electric & Gas Conv. Sub. Deb. 4½s 1970 .....	\$ 1.5
3/16 Southern Nevada Power 4.80% Conv. Pfd. (\$20 par) .....	1.5
4/ 5 California-Pacific Utilities 5% Conv. Pfd. (\$20 par) .....	1.0
4/15 Public Service of Indiana 4.20% Conv. Pfd. (\$100 par) .....	20.2
5/23 Southern California Edison Conv. Deb. 3½s 1970 .....	41.0
6/ 7 Hartford Gas Conv. Deb. 3½s 1965 .....	1.5
8/19 Mississippi Valley Gas Conv. Deb. 4½s 1975 .....	2.0
10/13 United Cities Utilities 5½% Conv. Pfd. (\$10 par) .....	0.3
	<hr/> \$69.0

## RECENT TRENDS IN UTILITY FINANCING

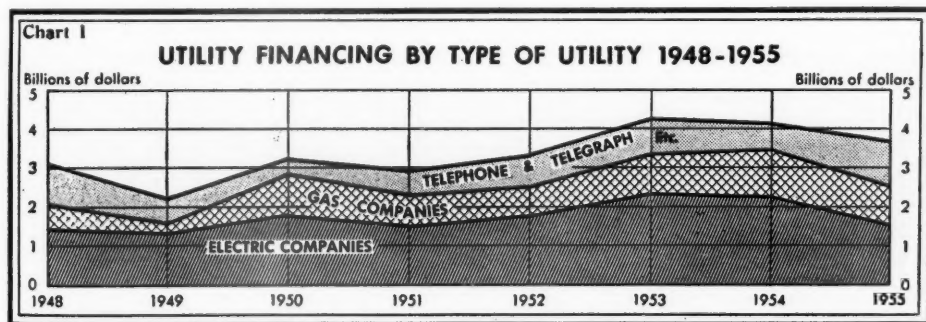
expenses must also come out. In the case of a bond issue or preferred stock it is possible to set up a premium or discount in the balance sheet. In the case of common stock this cannot be conveniently done (since par or stated value usually has no relation to market price), but nevertheless, the two factors, price deterioration and discount, should be studied by the management in deciding whether to sell common stock.

A SUBSTANTIAL proportion of all utility offerings of bonds and preferred stock is sold privately, but the dollar size of the issues is usually much smaller in the case of the private offerings. Hence, last year only about one-quarter of the dollar amount of bonds, and about 14 per cent of the preferred stocks, were placed in this manner. (The amount of common stock thus sold was negligible.)

Little data are available on the details of private financing. Ebasco Services' annual bulletin, "Analysis of Public Utility Financing," shows the net yield cost to the company of all private issues, before expenses. (These issues are almost invariably sold at par.) To compare the average cost of offering bonds publicly and privately, it is necessary to compare similar

issues for a given month, when market conditions were similar.

Thus in October, 1955, Pacific Power & Light sold \$10,000,000 first mortgage 4s of 1985 (Baa rated) *publicly*, at a net yield cost before expenses of 3.59 per cent, while Gas Service Company, whose mortgage bonds are rated A by Moody and whose debentures would presumably carry a Baa rating, sold \$7,000,000 debentures due 1975 *privately* at a net yield cost of 3.875 per cent. Another comparison may be drawn between the \$2,500,000 Wisconsin Natural Gas 3½ of 1980 (rated A) sold *publicly* to yield 3.35 per cent, and the sale by California Water Service (whose existing first mortgage bonds carried an A rating) of \$4,500,000 3.75s due 1980 at par to institutions. In these two cases the public sales seemed to work out better. On the other hand, Pacific Power & Light's net rate of 3.59 per cent for a public offering (see above) compared somewhat unfavorably with a private sale of \$1,000,000 St. Joseph Light & Power debentures due 1979 on a 3.50 per cent net basis (the bonds would theoretically carry a Baa rating since the mortgage bonds were rated A), although the difference may be explained by the latter's earlier maturity.



## PUBLIC UTILITIES FORTNIGHTLY

**I**N September Utah Power & Light sold \$15,000,000 3 $\frac{5}{8}$  per cent bonds due 1985 to the public at a net yield cost of 3.54 per cent, while Pennsylvania Power & Light sold \$25,000,000 bonds due 1985 (which should presumably rate A) on a 3.38 per cent basis privately, thus making a better showing for the private issue. However, it was also true that the A-rated securities of Tennessee Gas Transmission and Columbia Gas were sold at higher yield costs despite somewhat shorter maturities.

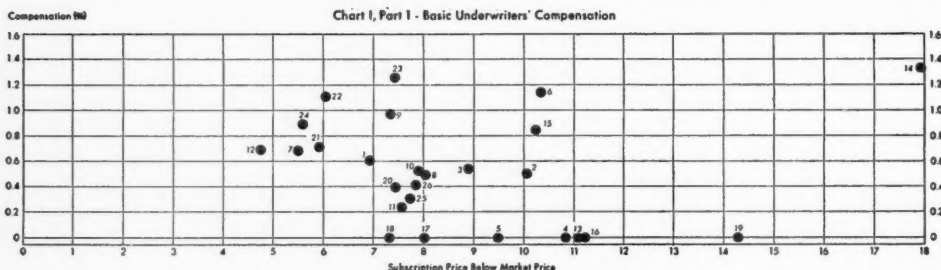
It is obviously difficult to reach definite conclusions as to public *versus* private offerings without detailed study. There may be other factors weighting the decision

to offer bonds privately, such as an uncertain money market, desire to avoid the trouble of registration, etc. In general, private deals seem to have been sought mainly by smaller utilities together with some of the large pipelines doing special financing. Sometimes, however, a large electric utility may discover that it can make a better deal privately than by a public offering—as indicated in the Pennsylvania Power & Light sale mentioned above.

Any exact comparison of financing costs as between private and public sales is difficult because figures are not readily obtainable on "finders' fees" and other ex-



SUBSCRIPTION PRICE BELOW MARKET PRICE IN PERCENTAGE OF MARKET PRICE \*  
AND UNDERWRITERS' COMPENSATION IN PERCENTAGE OF MARKET PRICE



# RECENT TRENDS IN UTILITY FINANCING

## UTILITY FINANCING 1948-1955

Chart II

BY TYPE OF SECURITY

Billions of dollars

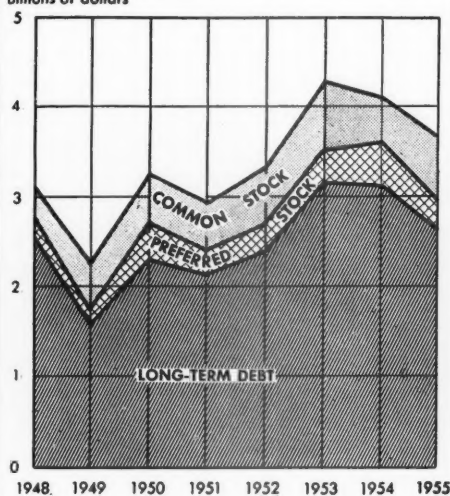


Chart III

BY TYPE OF SALE

Billions of dollars

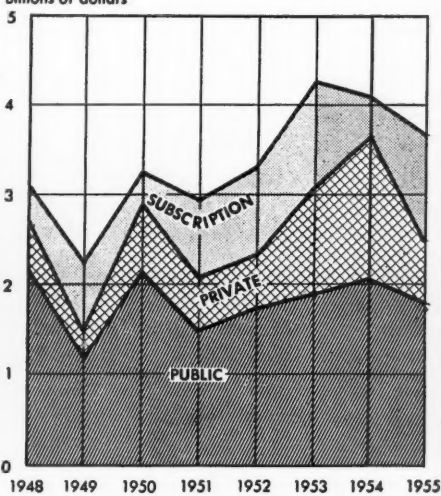


Chart IV

BY PURPOSE OF SALE

Billions of dollars

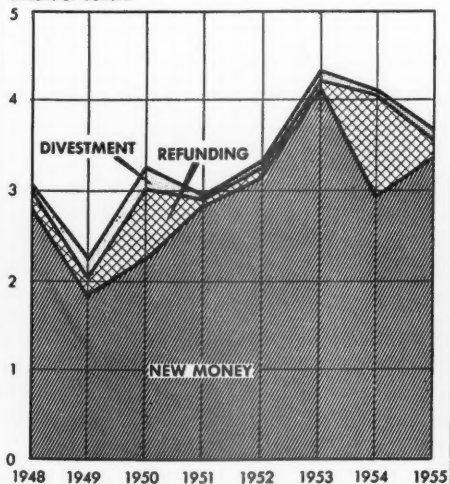
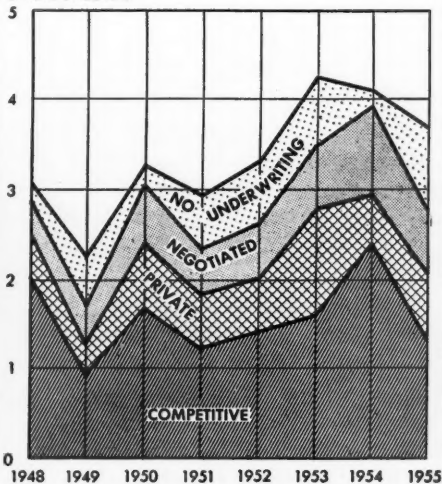


Chart V

BY METHOD OF SALE

Billions of dollars



## PUBLIC UTILITIES FORTNIGHTLY

penses incurred in sales made directly to institutions. In some cases the information is reported to the state commissions and can be obtained from them. A compilation relating to 15 private issues during 1955-56 showed an average finders' fee of 53 cents per \$100 bond value, with expenses of 67 cents. For 63 public offerings in 1955 expenses averaged exactly the same, 67 cents, which was rather surprising considering the fact that registration statements had to be prepared. However, the size of the private offerings averaged less than \$10,000,000 compared with \$21,000,000 for the public offerings, which may explain the discrepancy. For the \$637,000,000 American Telephone and Telegraph debenture issue miscellaneous expenses were only 46 cents per \$100.

It is also rather difficult to make any definite comparisons between the net costs of offering common stocks as subscription affairs or as direct sales to the public. (Preferred stocks and bonds are seldom offered through subscription except in the case of convertible issues.) One problem is that there are varying risk factors: Since rights can usually be exercised over a period of eighteen or nineteen days, they may be subject to "market break" risk over a longer period of time than a straight offering. (Both kinds of offerings are usually announced well in advance, but a public offering could perhaps be

deferred more easily in the event of an intervening break, since bids can then be rejected.) The risk of "market break" as a factor in the fixing of subscription price was analyzed in an article in the FORTNIGHTLY of April 12, 1951, by John F. Childs.<sup>1</sup>

Another factor is the desire of some utilities to make the rights of substantial value to stockholders, rather than of "nuisance value" as when rights sell at 1/32 or 1/64 of a point. Since the former issues are not usually underwritten it is possible to compare the net cost with issues which more nearly reflect normal "least cost" sales. The Irving Trust Company, in its "Public Utility Information Bulletin No. 8," published December 5, 1955, discussed in detail underwriters' compensation for subscription offerings. The chart on page 580 is taken from that source. The report was summarized in the department of "Financial News and Comment" in our December 22nd issue, pages 1036-37. A study of rights offerings from January 1, 1954, to June 30, 1955, showed the average results in table below, with the number of underwritings indicated in parenthesis.

THE underwriters' compensation for common stocks offered direct to the public last year ranged from 1.53 per cent

<sup>1</sup> "Market Break" in Underpricing Utility Shares" by John F. Childs, PUBLIC UTILITIES FORTNIGHTLY, April 12, 1951, p. 472.



	Average Percentages for	
	Underwritten Offerings	Not Underwritten
Subscription Price Set below Market by .....	8.1 % (19)	10.3% (7)
Underwriters' Compensation, Basic .....	0.7 % (19)	—
Underwriters' Compensation, Other .....	0.2 % (13)	—
Soliciting Dealers' Fees .....	0.03% (2)	0.4% (2)
Total Discount and Offering Costs .....	8.9 % (19)	10.4% (7)
Percentage Subscription Obtained .....	102.0 % (19)	124.0% (7)



# RECENT TRENDS IN UTILITY FINANCING

## VALUE OF PUBLIC UTILITY SECURITY OFFERINGS

SEGREGATION BY TYPE OF UTILITY

TWELVE MONTHS ENDED DECEMBER 31, 1955

THOUSANDS OF DOLLARS

	TOTAL	ELECTRIC COMPANIES	GAS COMPANIES	TELEPHONE COMPANIES	OTHER COMPANIES
<b>BY TYPE OF SECURITY:</b>					
LONG-TERM DEBT					
OFFERED PUBLICLY	\$1 268 007	\$ 824 000	\$195 507	\$ 240 500	\$ 8 000
OFFERED THROUGH SUBSCRIPTION	682 064	37 737	7 161	637 166	-
OFFERED PRIVATELY	672 580	65 150	486 230	95 350	25 850
TOTAL	\$2 622 651	\$ 926 887	\$688 898	\$ 973 016	\$33 850
PREFERRED STOCK					
OFFERED PUBLICLY	\$ 273 350	\$ 157 925	\$ 79 300	\$ 30 200	\$ 5 925
OFFERED THROUGH SUBSCRIPTION	23 243	23 243	-	-	-
OFFERED PRIVATELY	50 200	30 750	10 000	2 250	7 200
TOTAL	\$ 346 793	\$ 211 918	\$ 89 300	\$ 32 450	\$13 125
COMMON STOCK					
OFFERED PUBLICLY	\$ 213 995*	\$ 104 513	\$ 93 602*	\$ 9 700	\$ 6 180
OFFERED THROUGH SUBSCRIPTION	468 663	253 519	119 498	90 015	5 631
TOTAL	\$ 682 658	\$ 358 032	\$213 100	\$ 99 715	\$11 811
TOTAL FINANCING	\$3 652 102	\$1 496 837	\$991 298	\$1 105 181	\$58 786
<b>BY PURPOSE OF SALE:</b>					
TOTAL REFUNDING	\$ 230 572	\$ 129 348	\$ 29 857	\$ 71 367	-
TOTAL DIVESTMENTS	82 168	3 150	75 838	-	3 180
NEW MONEY:					
LONG-TERM DEBT	2 427 809	816 887	669 041	908 031	33 850
PREFERRED STOCK	303 311	194 818	69 300	26 068	13 125
COMMON STOCK	608 242	352 634	147 262	99 715	8 631
TOTAL NEW MONEY	\$3 339 362	\$1 364 339	\$885 603	\$1 033 814	\$55 606
TOTAL FINANCING	\$3 652 102	\$1 496 837	\$991 298	\$1 105 181	\$58 786
<b>BY METHOD OF SALE:</b>					
COMPETITIVE	\$1 273 665	\$ 914 871	\$111 794	\$ 239 000	\$ 8 000
NEGOTIATED	481 210**	171 568**	256 138	41 399	12 105
SUBSCRIPTION:					
COMPETITIVE	79 026	43 288	35 738	-	-
NEGOTIATED	252 273	193 741	20 448	34 493	3 591
NO UNDERWRITING	842 670	77 469	70 472	692 689	2 040
TOTAL SUBSCRIPTION	\$1 173 969	\$ 314 498	\$126 658	\$ 727 182	\$ 5 631
PRIVATE	\$ 723 258	\$ 95 900	\$496 708	\$ 97 600	\$33 050
TOTAL FINANCING	\$3 652 102	\$1 496 837	\$991 298	\$1 105 181	\$58 786

\* INCLUDES \$478 000 COMMON STOCK SOLD PRIVATELY.

\*\* INCLUDES \$3 000 000 PREFERRED STOCK SOLD WITHOUT UNDERWRITING.

Source, *Ebasco Services Incorporated*

## PUBLIC UTILITIES FORTNIGHTLY

of the offering price for a fairly large issue to as high as 10 per cent for two small issues; the average for 25 issues was 4.42 per cent. But this, of course, did not include shrinkage in market price following announcement of the financing, which as explained above is a factor in over-all cost. There is also the item of miscellaneous expenses which last year ranged from 5 cents to 47 cents a share.

Returning to the practice of underwriting a subscription offering, last year's actual results were as follows:

	<i>Electric</i>	<i>Gas</i>
No Underwriting .....	25%	56%
Underwritten—Negotiated ..	61	16
—Competitive ..	14	28
Total .....	100%	100%

In the previous year results were quite different, the electric utilities having sold 41 per cent of the subscription issues without underwriting, while the amounts underwritten were divided about equally between competitive and negotiated deals. However, the figures for the gas utilities also differed sharply from 1955, with a much larger amount being underwritten.

THERE are, of course, variations in detail as to the method of compensating underwriters. Perhaps it may be of interest to cite several cases. On May 19, 1955, Florida Power Corporation offered about \$10,000,000 common stock on a rights basis, underwriters being given 31 cents on all shares plus 55 cents on unsubscribed stock if more than 15 per cent was unsubscribed. Wisconsin Power & Light on May 23rd sold about \$7,000,000 common, underwriters' commission being 30 cents per share plus 65 cents on unsubscribed shares. On October 18th Louisville Gas & Electric sold about \$8,000,000

common stock, the underwriters' commission being 28.2 cents on all shares plus 70.5 cents on unsubscribed stock. In all three cases, the utility companies shared in the profits on sales of unsubscribed stock.

In addition to paying underwriters' fees some utility companies give "dealers' compensation" to a much larger group, these fees being paid for solicitation of subscriptions.<sup>2</sup> In four subscription offerings last year, ranging in size from \$1,000,000 to \$11,000,000, soliciting dealers were paid 25 cents per share for obtaining subscriptions, with maximum payments limited to \$125 to \$200 for single transactions involving large blocks of stock. Dealers were paid \$1 a share in another case for obtaining exchanges of new preferred stock for old. General Public Utilities and one or two other utility companies which have used dealers' compensation in the past did not issue any common stock in 1955.

THE practice of using dealers' compensation to supplement the underwriting of an offering raises various technical questions which cannot be discussed within the scope of this article. One of these would be the legal difficulty which might be encountered in permitting clients to open "special subscription accounts" to buy the new stock issue on only 25 per cent margin (as contrasted with the 75 per cent margin generally required). Since such accounts cannot be opened by any brokerage firm which receives compensation in connection with the underwriting,

<sup>2</sup> See article "A Technique of Offering Common Stock through Rights," by John F. Childs, *PUBLIC UTILITIES FORTNIGHTLY*, November 11, 1954, p. 617. In the footnotes at the end of this article there were lists of the companies which gave dealers' compensation on rights offerings during 1949-54.

## RECENT TRENDS IN UTILITY FINANCING

it is understood that permission must be obtained from the SEC before clients can be encouraged to use this purchase device. Since special subscription accounts were instituted to aid new financing, it is unfortunate that this technicality interferes with the practice.

In recent years the policy of giving over-

subscription privileges to stockholders has apparently been increasing. Last year 11 out of 46 rights offerings gave the privilege. (Offerings of convertible debentures to stockholders seldom or never carry oversubscription rights.) However, another new practice has arisen more recently, of offering any unsubscribed



## VALUE OF PUBLIC UTILITY SECURITY OFFERINGS

TWELVE MONTHS ENDED DECEMBER 31, 1955

THOUSANDS OF DOLLARS

	TOTAL CAPITAL FINANCING		BY TYPE OF SECURITY					
			LONG-TERM DEBT		PREFERRED STOCK		COMMON STOCK	
	AMOUNT	%	AMOUNT	%	AMOUNT	%	AMOUNT	%
BY TYPE OF UTILITY:								
ELECTRIC	\$1 496 837	41	\$ 926 887	36	\$211 918	61	\$358 032	52
GAS	991 298	27	688 898	26	89 300	26	213 100	31
TELEPHONE	1 105 181	30	973 016	37	32 450	9	99 715	15
OTHER	58 786	2	33 850	1	13 125	4	11 811	2
TOTAL	\$3 652 102	100	\$2 622 651	100	\$346 793	100	\$682 658	100
BY TYPE OF SALE:								
PUBLIC (DIRECT)	\$1 754 874	48	\$1 268 007	48	\$273 350	79	\$213 517	31
PRIVATE	723 258	20	672 580	26	50 200	14	478	-
SUBSCRIPTION	1 173 970	32	682 064	26	23 243	7	458 663	69
TOTAL	\$3 652 102	100	\$2 622 651	100	\$346 793	100	\$682 658	100
BY PURPOSE OF SALE:								
NEW MONEY	\$3 339 362	92	\$2 427 809	93	\$303 311	87	\$608 242	89
DIVESTMENT	82 168	2	-	-	10 000	3	72 168	11
REFUNDING	230 572	6	194 842	7	33 482	10	2 248	-
TOTAL	\$3 652 102	100	\$2 622 651	100	\$346 793	100	\$682 658	100
BY METHOD OF SALE:								
COMPETITIVE	\$1 352 691	37	\$1 154 000	44	\$ 65 850	19	\$132 841	20
NEGOTIATED	730 483	20	119 668	4	207 500	60	403 315	59
NO UNDERWRITING	845 670	23	676 403	26	23 243	7	146 024	21
PRIVATE	723 258	20	672 580	26	50 200	14	478	-
TOTAL	\$3 652 102	100	\$2 622 651	100	\$346 793	100	\$682 658	100

Source, *Ebasco Services Incorporated*

## PUBLIC UTILITIES FORTNIGHTLY

shares to employees, or in some cases to the utility's pension fund. Shares unsubscribed by stockholders were offered to employees in five cases during 1955, and in three other cases a definite number of shares were set aside for employees' purchases. New England Electric System recently announced a stock issue which will first be offered to stockholders for subscription, with any unsubscribed shares offered to employees. The remainder, if any, will be purchased by the successful bidding group which will underwrite the issue.

**I**n general the pattern of utility financing practice now seems quite well estab-

lished except for minor changes in techniques, such as offerings to employees and pension funds, etc.<sup>3</sup> New issues are now free of the "fads and fancies" which characterized some promotional financing in the 1920's.

The utility industry has developed a basically sound and efficient *modus operandi* for financing the huge construction program required both for normal growth and to meet the increasingly active rôle played by electricity in industry and in "gracious living."

<sup>3</sup> For a detailed discussion of gas utility financing, see the address by Marvin Chandler, delivered at the Mid-West Industrial Gas Council at Chicago, January 20, 1956, which was summarized in the FORTNIGHTLY (pages 463-468), March 29th issue.



### Uncle Sam the Big Boss

**"[G**OVERNMENT today is] an important user of the nation's supply of labor and other resources, a source of one-sixth of the national income, and a force in the distribution of income. . . .

"As an employer and contractor, as well as a guardian of our national safety, government in the United States has grown to unprecedented peacetime dimensions. Even more important, government has been vested with great power to intervene in the operation of the enterprise economy for the purpose of maintaining economic stability and growth.

"[In 1954] government in the United States employed 15 per cent of the workers. Some 17 per cent of all personal income was received from government. These figures cover state and local as well as federal government.

"In 1954 government in this country made 32 per cent of the nation's expenditures on new construction and equipment. It purchased \$46 billion worth of goods and services from business enterprises, in addition to what it paid out to individuals."

—SOLOMON FABRICANT,  
Director of research, National Bureau  
of Economic Research.

# The Gas Consumer's Stake in the Depletion Tax Provision

*Would the natural gas consumer be hurt or helped if the tax depletion allowance on gas well production were cut down or cut out by Congress? Would it affect the production cost of gas to the pipeline and ultimately to the consumer of the distributing utilities? In other words, have the gas consumers as such any interest in maintaining the present tax depletion allowance, or would they be better off if it were curtailed or abandoned?*

By RUSSELL B. BROWN\*

CIRCUMSTANCES require a rather unusual preface to this article. These introductory comments, therefore, do not relate directly to the subject of this discussion.

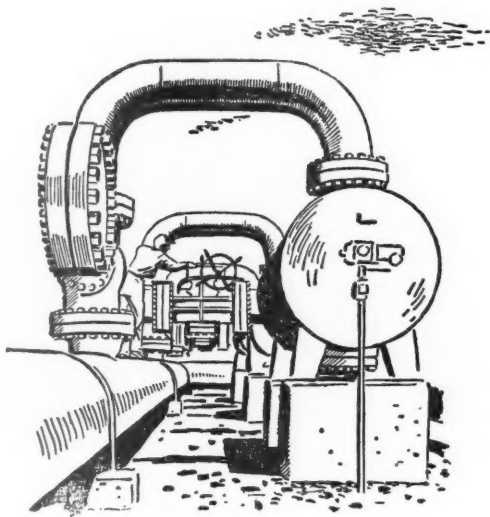
During the past months, legislation dealing with the regulation of natural gas production (the Harris-Fulbright Bill, passed by the Congress and vetoed by the President) was a matter of widespread interest in addition to concern of those

directly affected. Much controversy developed.

Under the conditions, misunderstandings existed between some producers of gas and some gas distributors. There were honest differences of opinion and viewpoint.

As would be naturally expected, those engaged in one activity usually are not closely familiar with a different type of activity. This resulted in some unfortunate attitudes and statements on both sides of the question. This, in turn, seri-

\*General counsel, Independent Petroleum Association of America, Washington, D. C.





## PUBLIC UTILITIES FORTNIGHTLY

ously hampered a proper understanding of the issues.

**M**ISUNDERSTANDING is as harmful to the industrial community as it is to our processes of government.

Under our form of government, certain controls are imposed only in instances where free competition is interrupted or is ineffectual.

Thus utility regulation has been recognized as necessary under certain circumstances to insure the most useful service to the community served by the utility. Utility regulations, however, have not applied to competitive activities because experience has demonstrated that the consumer is best served by a free market.

Unavoidably, perhaps, the processes of regulation are somewhat cumbersome and expensive. They add to the cost of the product regulated. This comes from the nature of regulation and does not mean that excessive profits inure to those that are regulated.

In supplying natural gas to the consumer, the functions of discovery, development, and production have been competitive activities intimately associated with the equally competitive business of finding and producing crude oil. Historically, these functions have been recognized as having none of the characteristics of a utility. Because of their nature, on the other hand, the interstate transportation of gas and local gas distribution have been regulated by appropriate public agencies.

Everyone should recognize that under the law it is impossible for distributing companies to profit excessively through their utility operations. Regulatory authorities throughout the United States are public servants and should not be viewed

as desiring to add unnecessarily to the consumer's cost.

It is a fact, of course, that the cost of gas is greatly increased between delivery by producer to the transmission line and receipt by consumer from the distributor. This fact should not, and does not, imply undue profits in transportation or distribution.

In contrast, this fact is viewed by many as evidence that much of this added cost is the result of the cost of regulatory processes. Whatever the extent of these regulatory costs may be, every businessman knows from experience that regulatory requirements are necessarily time consuming and costly.

**N**ATURALLY, the gas producer is convinced from experience that federal regulation of his activities is both unnecessary and unsound. He believes sincerely that regulation will lessen the efficiency of producing operations which would inevitably add to the cost that must be passed on to the consumer. Like the distributor, he does not want to see gas priced out of a competitive market. A better understanding of mutual problems among producers, transporters, and distributors would serve both the industry and the public by advancing the fundamental objective of all—the increased use of this important fuel.

Increased use of gas means greater supplies at prices that attract the consuming public. More supply at the lowest possible cost suggests the title of this article: "The Gas Consumer's Stake in the Depletion Tax Provision." The following comments are made with the hope of encouraging an improved understanding of oil and gas tax provisions.

## THE GAS CONSUMER'S STAKE IN THE DEPLETION TAX PROVISION

### *Background of the Depletion Allowance*

FOLLOWING the adoption of the Sixteenth Amendment to the Constitution of the United States authorizing federal taxes on income, the Congress was confronted with the problem of providing equitable treatment of all tax-paying groups and, at the same time, accomplishing the purpose of raising adequate revenue for the federal government.

Obviously, all money received as a result of business transactions, without any allowance for capital or current expenses, could not be treated as taxable income. To do this would deny business the right to retain the capital to continue in operation. Businesses operating at a loss would be taxed. The cost of goods sold or services rendered would not be recognized, continued business activities would be either crippled or made impossible.

In order to determine that part of total income properly subject to income taxes, many definitions of allowable deductions have become a part of our income tax laws. Early it became apparent that there were differences in industry operations that could not be treated under one formula. At the outset, it was also recognized that tax laws and regulations must be so drawn as not to tax capital. That author-

ity was not given to the Congress by the Sixteenth Amendment.

ONE of the principal difficulties encountered in the administration of the federal income tax laws was the determination of capital in the case of extractive industries in general and the petroleum industry in particular. The amount of capital that could be allotted to various successful exploratory operations differed. The cost had a varied relation to value. One operation involving great capital investment might discover small capital value. Another, of less investment, might result in much greater capital value. The problem was further complicated by the uncertainty, inherent in these operations, as to how much oil and gas had actually been discovered. The amount discovered cannot be actually determined until many years later, perhaps not until the well is exhausted. Here was a type of business operation, essential to our economy, where differential tax treatment was clearly necessary.

The need and justification for differential tax treatment for oil and gas can be demonstrated in many ways. For example, unless the income tax laws recognize that part of the money received, as each unit is sold, is capital rather than nor-



**Q** "MISUNDERSTANDING is as harmful to the industrial community as it is to our processes of government. Under our form of government, certain controls are imposed only in instances where free competition is interrupted or is ineffectual. Thus utility regulation has been recognized as necessary under certain circumstances to insure the most useful service to the community served by the utility. Utility regulations, however, have not applied to competitive activities because . . . the consumer is best served by a free market."

## PUBLIC UTILITIES FORTNIGHTLY

mal income, the operator who makes a successful discovery would be forced in self-protection to sell his property on completion of his discovery and take the application of the capital gains provision of the tax laws. What is worse, the successful explorer would not stay in the business of producing oil and gas. Reserves would be accumulated in the hands of a few large companies with increasing concentration and decreasing competition.

**I**N addition, differential tax treatment is required in order to properly recognize peculiar problems in the discovery of natural resources. In the case of oil and gas, approximately 60 per cent of every dollar received from the sale of current production, amounting to more than \$4 billion each year, is put back in the ground to find and develop new reserves to replace those consumed. This huge capital replacement operation at great risk creates, beyond question, a unique situation from a tax standpoint, requiring a recognition of both the depletion of capital through production and the incentives needed for the expenditure of such huge amounts of capital at great risk.

Throughout the early years of the federal income tax laws, the Congress and administrative branches of our government were concerned with this problem. Special committees of Congress, aided by experts from the Treasury Department, explored the matter fully. After trying different methods, the present provision of percentage depletion was adopted in 1926. The law first became applicable for the taxable year of 1925, and has now been in effect for thirty years. It is, therefore, no longer a theory. The results are now a matter of record.

### *Effect of Depletion on Taxes*

**T**HE theory of specific tax provisions, such as percentage depletion, could be discussed at great length. It is not practical to attempt to do so in this article. In any case, the results of such theoretical discussions are often inconclusive and contradictory.

A more direct approach is to look at the effects of depletion. How has it been applied in actual practice? How has it worked? What are the results in terms of taxes paid, or not paid, by oil and gas producers?

To provide a factual answer to such questions, we have been engaged in a study of the official records of the U. S. Treasury Department. These records show the effects of percentage depletion on federal income taxes. They cover all income tax returns for all corporations. They are not limited to a few isolated or selected cases which are sometimes cited by those who seek to present a misleading picture of petroleum tax provisions.

Treasury Department statistics contain detailed information for corporations in the petroleum industry, grouped in two main classifications: (1) corporations engaged primarily in the producing branch of the industry, classified as "oil and gas producers"; and (2) corporations engaged in refining, including the large integrated oil companies, classified as "oil refiners." The figures for the latest year for which Treasury Department statistics are available (1952) show 3,132 corporations classified as "oil and gas producers" and 697 corporations classified as "oil refiners." These statistics, therefore, cover more than 3,800 corporations, large and small, that account for the bulk of all the oil and gas produced in the United States.

## THE GAS CONSUMER'S STAKE IN THE DEPLETION TAX PROVISION



	<i>Prewar Average (1936-40) (Mill. \$ Per Year)</i>	<i>Latest Yearly Average (1951-52) (Mill. \$ Per Year)</i>	<i>(Number Of Times Prewar)</i>
<i>Oil and Gas Producers</i>			
Total Receipts .....	799	3,294	4.1
Total U. S. Income Taxes .....	12	243	20.6
<i>All Industrial Corporations</i>			
Total Receipts .....	135,347	524,173	3.9
Total U. S. Income Taxes .....	1,422	20,615	14.5

THE official record for these petroleum corporations speaks for itself. It shows the total income received during the year (*i.e.*, total receipts), the total deductions taken in determining that part of income subject to U. S. income taxes, and the total income tax liability (including excess profits taxes) of these corporations.

What do these government figures show? What is the effect of depletion? Does the petroleum industry pay relatively small or large federal income taxes? What about the industry's tax deductions? What are the full facts as shown by the Treasury Department statistics?

During the 27-year period, 1926 through 1952, the federal income taxes for petroleum corporations (producers and refiners) totaled \$6,656,300,000. The size of the industry's more recent tax burden is shown by the fact that these

taxes for the latest seven years (1946-52) amounted to \$4,967,100,000. These figures should leave no doubt that the petroleum industry pays very large, and increasing, income taxes. The taxes paid by the "oil and gas producers" group indicate that total income taxes paid by such corporations in 1952 averaged about 35 cents a barrel for every barrel of oil produced. On this basis, the producing branch of the industry alone contributes in the neighborhood of \$1 billion a year to the income taxes collected by the federal government.

BUT, total taxes paid are only one part of the story. The petroleum industry is a large and growing business. Have these taxes kept pace with the industry's growth, as compared with other industries?

The figures in the table above provide information on that question.

## PUBLIC UTILITIES FORTNIGHTLY

It will be noted that the total yearly income of oil and gas producers in 1951-52 was 4.1 times the prewar average, or very slightly more than the increase of 3.9 times for the total income of all industrial corporations. Taxes for oil and gas producers, however, increased 20.6 times as compared with 14.5 times for all businesses. Taxes for oil and gas producers, therefore, have increased much more than the average for all industries.

Based on the above figures, the ratio of income taxes to total receipts during the latest years as compared with the prewar years is as shown in the table below.

It will be seen that the oil and gas producers paid 7.37 per cent of their total receipts in income taxes during the latest two years, as compared with 3.93 per cent for all industries. Also, this percentage paid in taxes by oil and gas producers shows a much greater increase over prewar years than in the case of all industrial corporations.

THE record of total deductions for tax purposes provides another indication of the petroleum industry's relative tax situation. If percentage depletion resulted in preferential treatment, it would be expected that total deductions taken by oil and gas producers would be abnormal and inordinate. The facts, as shown by Treasury Department statistics, are as indicated in the table on page 593.

These figures show that oil and gas producers deducted 85.4 per cent of their total income in determining taxable income. All

corporations deducted 91.7 per cent. In other words, oil and gas producers paid income taxes on 14.6 cents out of every dollar of total income while business in general was paying taxes on 8.3 cents out of every total dollar received.

The above figures represent only a brief summary of the information from the tax records of the Treasury Department. The records in full are available to all. They provide detailed supporting evidence that the petroleum industry pays a full and fair share of the nation's tax burden—in fact, a relatively greater share than industry in general.

The Treasury Department figures show that oil and gas production has expanded greatly, with tax revenue to the federal government increasing at an even greater rate. This confirms that the Congress has made, and continues to maintain, a realistic view of its taxing authority, having in mind the primary incentive of maintaining all industries so that they may contribute their proportionate share to our expanding economy.

IN 1926, the year that the percentage depletion law was passed, the oil industry's proved reserves of crude oil amounted to 17 billion barrels, with natural gas reserves estimated at 23 trillion cubic feet. Thirty years later, proved crude oil reserves in the United States exceeded 30 billion barrels and natural gas reserves amounted to more than 210 trillion cubic feet. During those thirty years, there had been consumed from the reserves of the



<i>Ratio of Income Taxes to Total Receipts</i>		
	<i>Prewar Years</i>	<i>Latest Years</i>
	<i>1936-40</i>	<i>1951-52</i>
Oil and Gas Producers .....	1.47%	7.37%
All Industrial Corporations .....	1.05%	3.93%



## THE GAS CONSUMER'S STAKE IN THE DEPLETION TAX PROVISION

<i>Total Seven Postwar Years, 1946-52</i>	<i>Oil and Gas Producers (Mill. \$)</i>	<i>All Industrial Corporations (Mill. \$)</i>
Total Receipts .....	15,496	2,967,592
Total Deductions (Incl. Percentage Depletion) .....	13,228	2,722,237
Ratio of Deductions to Receipts .....	85.4%	91.7%



United States more than 45 billion barrels of crude oil and more than 130 trillion cubic feet of natural gas.

So, during this period of time the domestic producing industry has continued to supply more and more oil and gas and, at the same time, to build up adequate oil and natural gas reserves to meet the increasing demands of the future.

This adequate supply of oil and natural gas has been furnished at reasonable prices, as is evidenced by the fact that the prices of petroleum products and gas to the consumer have been consistently low in relation to the general price level.

The record of thirty years' experience with percentage depletion and the other petroleum tax provisions shows that the oil industry in the United States has continued to supply adequate oil and gas for a constantly expanding economy at reasonable prices, and that the oil industry has not inordinately profited and has paid its fair share of federal taxes.

### *Summary*

**W**HAT, then, is the gas consumer's stake in the depletion tax provision?

Obviously, the consumer is interested in both supply and price. He wants the assurance of sufficient gas to meet his needs at all times. He expects to pay a reasonable price—the lowest price consistent with adequate supplies.

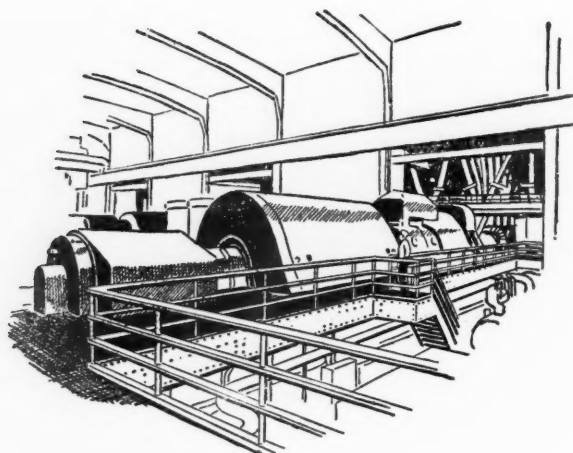
The depletion tax provision was established, and has been maintained, as a nec-

essary differential tax treatment to recognize the unique and tremendous problem of finding adequate supplies to replace the oil and gas that is consumed. No other industry has such a capital replacement operation, involving the reinvestment of billions of dollars each year at great risk.

Under the depletion tax provision, the petroleum industry has both the funds and the incentive to discover and develop the necessary supplies of crude oil and natural gas. Depletion has become an integral and basic part of the industry's economic structure. Without the depletion tax provision, it is axiomatic that there would be substantially less funds and less incentive to find oil and gas.

**R**EDUCED to simple terms, depletion means more oil and gas at lower prices to the consumer. This basic fact is recognized even by those who are critical of this tax provision, as shown by recent testimony of college professors who advocate substituting higher prices for depletion. Again in simple terms, the elimination or reduction of depletion would result inevitably in higher prices if the industry is to continue to find adequate oil and gas reserves.

The gas consumer, therefore, has a vital stake in the depletion tax provision which makes it possible for the gas producer, the gas transmission company, and the gas distributor to serve this nation with ample supplies of this essential and superior fuel.



## Atomic Energy and the Power Industry

This is a thought-provoking article exploring the economics of three types of electric power generation: hydro, steam, and the atomic reactor. The author has endeavored in this discussion to bring into one place an analysis of what is known to date on the cost of these three types of generation.

By FRANKLIN H. COOK\*

**I**N the latter part of January, 1956, the citizens' Panel on the Impact of the Peaceful Uses of Atomic Energy told the Congress of the United States that by 1980 atomic energy should be able to produce more electricity than is now generated by conventional means.<sup>1</sup> Specifically, the panel looks for an increase in annual capacity from our present 115,000,000 kilowatts to 600,000,000 kilowatts. Of

this latter figure, 135,000,000 kilowatts would be produced by atomic energy. Steam generation would be up 60 per cent from today.

The panel's report seems to be predicated upon the assumption that atomic fuel will ultimately replace fossil fuels as a primary source of power. This affirmation is not based upon fear that coal, oil, and gas reserves will be depleted, but that atomic energy will be a *cheaper* form of energy than competing fuels.

Also, the panel narrowed the field of possible applications of nuclear power.

\*Professor of economics, college of business administration, The Pennsylvania State University, University Park, Pennsylvania.

<sup>1</sup>*The New York Times*, Wednesday, February 1, 1956, p. 1, 19.

## ATOMIC ENERGY AND THE POWER INDUSTRY

Employment of the atom in reciprocating engines was dismissed as impractical at the present technological stage of development. The use of atomic energy in airplanes was similarly repudiated because of hazard to persons on the ground in the event of a crack-up. Generation of electric power appeared to be the most feasible area in which nuclear energy could be utilized, replacing conventional fuels for steam generation.

THIS "hot" capsule, peaceful use of the atom, has now been offered to the electric power industry by the government. Political authorities had three possible approaches to industrial use of the atom. First, under guidance of a public power-minded administration, the state might have reserved the development of nuclear power as a government monopoly. Secondly, it could have turned the entire project over to private industry. Present world political and military conditions negate this possibility. Lastly, it might effect a compromise between the two positions by licensing the fuel to private industry, and encouraging risk capital to carry on the economic growth of the energy singlehanded or with government aid. The latter position has been chosen.

The selection of the electric power companies as the representative of private industry in the evolution of atomic power has benefited common stocks of engineering and manufacturing firms connected with nuclear energy or the manufacture of electric generating equipment. The electric power companies and the coal producers have not been so elated. Without the capital reserves of a nonregulated industry, the electric utilities hesitate to burden their stockholders with the risk of

being the first to venture into this "new frontier." Nevertheless, international politics, government sanction, and public expectations prod them onward.

INROADS of nuclear energy upon the electric power field will be gradual, for the peaceful uses of atomic fuel are tied in with the steam turbine. Today, approximately one out of four kilowatts generated comes from a hydro plant. Further, a large number of consumers in the United States do not buy directly from a company that generates electric power, but from a purchasing company that buys either hydro or fuel-generated electricity from a wholesaler. Investors in the hydro and purchasing company may never have to worry about a change to atomic power.

The influence of nuclear energy can be assessed by studying the effect of atomic generation upon the three types of companies: purchasing, steam, and hydro. A company fits into a classification if it secures over 50 per cent of its power from one of those sources. Each type of company has a different plant investment and expense pattern. For example, the purchasing company has a large percentage of plant invested in its distribution system, and low total plant investment in relation to operating revenue, whereas the hydro company shows a large plant investment in terms of operating revenue with practically no fuel costs. The steam company lies somewhere between the purchasing and hydro companies.

IN 1953 before deduction for depreciation reserves, the median purchasing company had \$2.70 invested in total utility plant for every dollar of operating revenue; the steam company, \$4.20; and

## PUBLIC UTILITIES FORTNIGHTLY

the hydro, \$5.30. Chart I, illustrating the percentage of plant devoted to production, transmission, and distribution by the three types of companies, demonstrates that the purchasing company has the highest number of dollars invested in distribution facilities; the hydro, in production plant; and the steam company has almost an equal investment in production and distribution equipment, the latter being slightly more than the distribution plant of the hydro company.

Transmission lines owned by the pur-

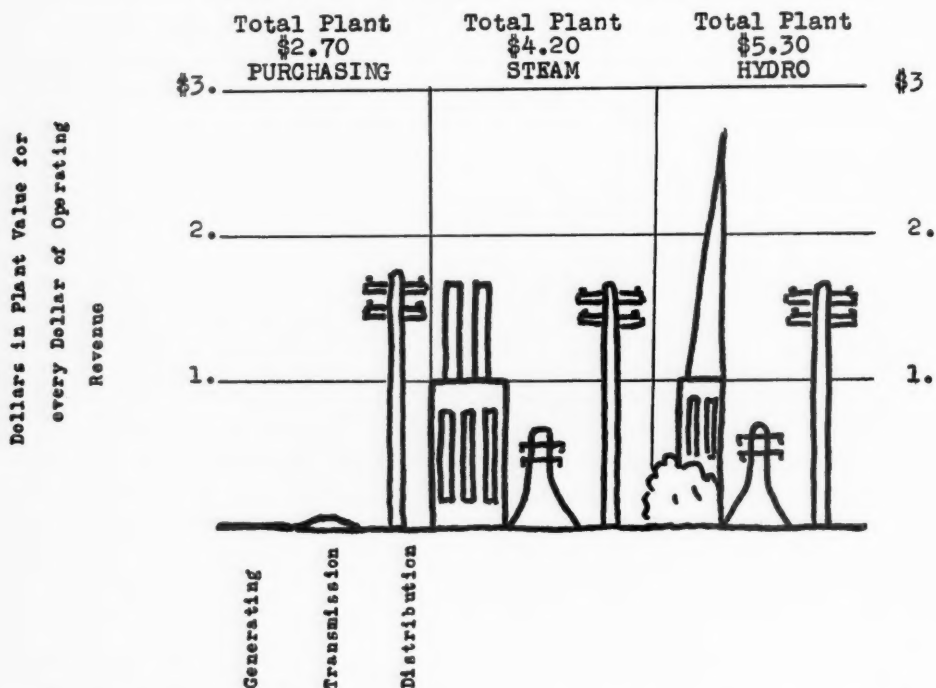
chasing company are negligible, although representing a greater percentage of total plant than generating assets. Because of the location factor the hydro company might be presumed to have a heavy investment in transmission lines, but the investment is only slightly greater than for the steam company.

ONLY by the relocation of existing generating facilities would nuclear energy affect *any* company's investment in distribution and transmission equipment.



CHART I

COMPARATIVE INVESTMENT MEDIANS FOR PURCHASING, STEAM, AND HYDRO COMPANIES IN PRODUCTION, TRANSMISSION, AND DISTRIBUTION PLANT



Source: All companies having operating revenue solely from sale of electricity, "Statistics of Electric Utilities in the United States, 1953," Federal Power Commission, Washington, D. C.

## ATOMIC ENERGY AND THE POWER INDUSTRY

The stockholder in the purchasing company has practically no generating plant represented by his investment. In fact, the present trend for these companies is away from the ownership of such assets. Therefore, atomic energy will enter his deliberations only when the management of the company considers the addition of generating properties to the plant. On the other hand, the investors in the steam and hydro companies are going to face the problem of nuclear investment more quickly. Whether it is adopted, and when, depends upon two factors: the future demand for electricity from a particular company and the competitive cost with other fuels as a source of energy.

A presently generating plant, steam or hydro, will add atomic energy units either as replacement of existing facilities or as supplemental units. Where a company is already generating by steam it would be very easy to replace present mineral fuel boilers with atomic units, for only about half of the production plant is represented by boiler apparatus. Because its existing generating resources are not readily adaptable to production by atomic energy, a hydro company would not be likely to supplant its present dams with nuclear boilers.

**H**OWEVER, if a steam or hydro company is located within an expanding market and high plant and load factors make additional units imperative, undoubtedly, atomic units would be given consideration if the cost of production per kilowatt-hour was competitive with existing steam plants. An additional atomic unit could be easily tied into a steam-generating system, making use of much installed equipment; and, if it is a large steam-generating com-

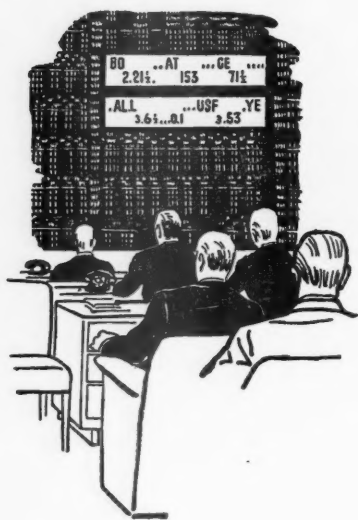
pany, the construction of additional plant is a recurring problem.

Management of a hydro company requiring supplemental units because of demand would have three possible solutions: make greater use of hydraulic power; purchase power; add a steam-generating unit. It would be unlikely to choose the first, expand hydro facilities, for available water-power sources are decreasing rapidly in the United States. Within the last decade hydro production increased about 50 per cent; fuel, over two times; and gas and oil generation quadrupled.<sup>3</sup> Because expansion by steam generation would be a new type of production for the personnel and management of the hydro company, the addition of a new generating unit either fuel-fired or atomically heated would not be a first choice. First choice would be an attempt to purchase additional power needs. Thus, for the hydro company, steam generation by coal, gas, oil, or atom would be a last choice. A company experienced in steam will more readily adopt atomic fuel than a purchasing company or hydro company that does not possess the adaptable equipment nor personnel acquainted with steam generation.

**W**HETHER a purchasing, steam, or hydro company contemplates the use of atomic energy, a paramount factor in reaching that decision is the cost of production of such power. This cost is made up of two items: fixed and variable costs. The main element in the first group is the depreciation on the plant. Labor and fuel are the chief variable items. Today, it seems the effect of atomic fuel will be to

<sup>3</sup> Federal Power Commission, "Consumption of Fuel for Production of Electric Energy, 1954," FPC S-119, Table V, p. 9.





## Electric Utility as Private Industry

"THE selection of the electric power companies as the representative of private industry in the evolution of atomic power has benefited common stocks of engineering and manufacturing firms connected with nuclear energy or the manufacture of electric generating equipment. The electric power companies and the coal producers have not been so elated. Without the capital reserves of a nonregulated industry, the electric utilities hesitate to burden their stockholders with the risk of being the first to venture into this 'new frontier.' Nevertheless, international politics, government sanction, and public expectations prod them onward."

increase the percentage of fixed costs through greater plant investment. In 1953 the median purchasing company had \$51.50 invested in production plant for every kilowatt of capacity; the steam, \$132; and the hydro, \$178. Contemplated atomic energy plants are expected to cost between \$230 and \$290 per kilowatt.<sup>3</sup> This makes the outlay greater than for the hydro plant, and if coupled with an accelerated depreciation rate, the result is a greater annual depreciation charge than for the hydro plant—at least 10 per cent of operating revenues. However, in terms of production cost, added depreciation on generating plant is an infinitesimal part of

total cost of power at the generator. The variable items represent a more significant component of production cost.

IN 1953 production cost, exclusive of depreciation, was 1.23 cents per kilowatt-hour for the purchasing company, mainly for purchased power; for the steam company, 4½ mills; and for the hydro company, slightly over 2 mills. According to Mr. Morehouse<sup>4</sup> the generating cost of nuclear energy per kilowatt-hour is estimated to be between 6.7 and 9 mills. If that figure includes depreciation on production equipment, it would compare with 1.3 cents for the purchasing company, slightly over 5 mills for the steam, and about 3 mills for the hydro. If deprecia-

<sup>3</sup> "How Will Atomic Energy Affect the Electric Power Industry?" by E. W. Morehouse and Theodore Baumeister, *Land Economics*, May, 1955, 31:2, pp. 93-107.

<sup>4</sup> *Op. Cit.* pp. 99, 105.

## ATOMIC ENERGY AND THE POWER INDUSTRY

tion on production plant is added to the production expense per kilowatt-hour it amounts to about one mill per kilowatt-hour for all three types of companies and would approximate that figure for the atomic energy plant. The operating statement characteristics of a nuclear fuel plant would lie somewhere between that of a steam plant and a hydro plant.

Table I below shows a vertical analysis for the Income and Earned Surplus statement of the purchasing, steam, and hydro companies. For the atomic plant to compete, depreciation would approximate that of the steam plant, and production expenses would lie somewhere between the 24 per cent of the steam company and the 16 per cent of the hydro.

**T**HE only conclusion that can be drawn from the analysis of the electric power industry in terms of the application of nuclear fuel is that at the present time the atom is not in a competitive position with existing fuels in terms of production cost per kilowatt-hour.

A look at the trend line of production costs for the three types of companies since 1948 may be helpful in determining when and where nuclear energy may first

be found economically profitable in the electric power industry. From 1948 to 1953 production expenses for the purchasing company have gone up from 43 per cent to 46 per cent of operating revenue. Nevertheless, the companies have been able to keep their average selling price per kilowatt-hour in line by dropping it from 2.8 cents to 2.7 cents for the same period. Among the purchasing companies there is pressure from the increasing production expenses.

**H**OWEVER, both the steam and the hydro companies have had a decrease in production expenses for this period, the steam moving from 34 per cent to 24 per cent—a decline of 10 per cent in the period from 1948-53, inclusive. Undoubtedly, this was effected by the introduction of more efficient equipment, requiring less fuel and labor per kilowatt-hour. Hydro companies dropped about the same amount from 25.6 per cent in 1948 to 16 per cent in 1953. The average selling price per kilowatt-hour of the steam companies held steady during this period at 1.9 cents, whereas the hydro companies dropped from 1.4 cents to 1.3 cents between 1952 and 1953.



TABLE I

### COMPARATIVE COMMON-SIZE EXPENSES FOR PURCHASING, STEAM, AND HYDRO COMPANIES

	<i>Purchasing</i>	<i>Steam</i>	<i>Hydro</i>
Average Selling Price Per KWH Sold ....	2.7¢	1.9	1.3
Depreciation .....	5.6%	9.8	9.2
Taxes .....	12.5	22.3	25.5
Production Expense .....	45.9	24.3	16.1
Transmission Expense .....	.3	1.3	1.7
Distribution Expense .....	8.9	7.9	7.3
Customer & Accounting Expense .....	3.9	3.2	2.9
Sales Promotion Expense .....	1.4	1.9	.8
Administrative & General Expense .....	6.9	7.3	8.8

Medians based on companies having all operating revenue from sale of electricity, "Statistics of Electric Utilities in the United States, 1953," Federal Power Commission, Washington, D. C.

## PUBLIC UTILITIES FORTNIGHTLY

An examination of average cost per kilowatt-hour<sup>5</sup> for all three types of companies shows resistance against increased expenses. The purchasing company had costs of 2.5 cents per kilowatt-hour in 1948 and the same in 1953; steam, 1.5 cents and 1.4 cents; hydro, 1.2 cents and 1.1 cents. Over the 5-year period steam and hydro companies have managed to reduce their operating revenue deductions per kilowatt-hour by one mill. The trend cost picture of these three types of companies does not seem to be significant in ascertaining which type of company will be the first great user of atomic energy.

**T**HE introduction of nuclear energy to the electric power industry will not make present plant investments obsolete. As the use of atomic power spreads through the electric power field, management in replacing existing facilities or adding new units will be governed by cost factors in integrating the atom to their system. Chief stumbling blocks to the purchasing and hydro companies will be the addition of new and different generating units, which objection would be present if the new additions were fossil fired. If the cost trend per kilowatt-hour for nuclear fuel is downward and for other fuel upward, then prior to 1980 some plants will have found it advantageous to change to

atomic power. They will be purchasing, steam, and hydro companies for whom the transportation of coal, gas, or oil makes such fuel consumption so costly that nuclear heat may be used advantageously.

Since 1925 the progressive rate of decline in the consumption of coal per kilowatt-hour has not been rapid. From 1920 to 1925 the rate dropped from three pounds of coal to two pounds of coal per kilowatt-hour. From 1925 to 1954, twenty-nine years, the rate declined to one pound.<sup>6</sup>

Technologically, atomic power is in its infancy; as it matures it should have a greater increase in efficiency than coal has shown in the last decades, particularly if the hydrogen or fusion process is released to private industry.

**I**N the main, because of adaptability of equipment, personnel, and management, atomic energy will slowly enter the electric power field as unit additions to steam plants. The transition will be gradual. Nuclear force is not powerful enough to shatter in one moment ancient hindrances to change; obstructions that now and in the past keep purchasing companies from changing to hydro or steam generation, hydro companies from adding steam units, and steam companies from installing more efficient steam plants.

<sup>5</sup> The term "average cost" as used here means total operating revenue deductions divided by kilowatt-hours sold.

<sup>6</sup> Federal Power Commission, "Consumption of Fuel for Production of Electric Energy, 1954," FPC S-119, p. 5.

---

**"U**NDER present circumstances, reductions in tax rates need the support of reductions in government expenditures. Expenditures which are not paid for by tax revenues can, in the end, be paid for only by a far more insidious type of taxation—inflation."

—ROWLAND R. HUGHES,  
Former Director, Bureau of the Budget.

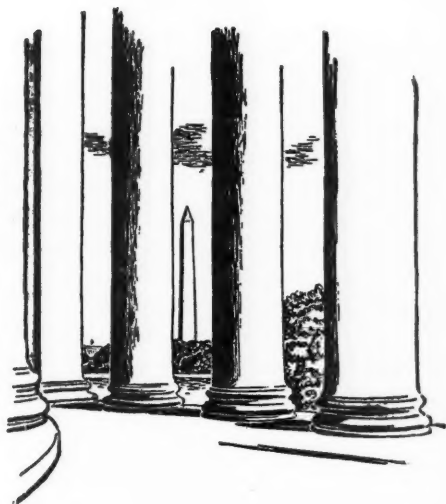
# Washington and the Utilities

## *Power Policy Politics*

THERE can be little hope of constructive legislative results from the recent reports on federal power policy filed by majority and minority members of the House Government Operations Subcommittee. The tone of these reports is so obviously partisan, the so-called "conclusions" could have been forecast before the subcommittee's investigation even got started. In fact, some of the very same charges were made prior to the study of power policy by the subcommittee, headed by Representative Chudoff (Democrat, Pennsylvania). In other words, the whole thing has slipped into the familiar pattern of just another political row in a campaign year.

The Democratic majority on the House investigating subcommittee accused Eisenhower administration officials of "a determined effort to sabotage and wreck the federal power program." Republicans on the Power and Resources Subcommittee shot back that the Democratic-approved committee report was packed with "unfairness and prejudice."

The bristling majority and minority



findings followed hearings last year on Interior Department regulation changes affecting transmission of federal electric power. Chief targets of the Democrats were Douglas McKay, Secretary of the Interior; Clarence A. Davis, Under Secretary; and Fred G. Aandahl, Assistant Secretary. They suggested these officials should resign.

The officials named did not comment on the subcommittee's report, which got party-line endorsements from the parent Government Operations Committee.

McKAY, a one-time Republican governor of Oregon, has resigned to run for Senator from his state, where federal power policy is a big political issue. The Democratic report said the hearings showed McKay, Davis, and Aandahl, a former GOP governor of North Dakota, have "little concern" for "fair dealing . . . in their rush to cripple and thwart a sound federal power program as established by Congress." The Democrats said:

These officials have repeatedly attacked as socialistic the program established by Congress to preserve for the

## PUBLIC UTILITIES FORTNIGHTLY

people the benefits of their own God-given natural resources.

The committee believes that if these public officials feel that they cannot carry out in good faith the laws they have sworn to uphold, they should resign their offices and be replaced by men who will do so.

REPUBLICANS on the 8-man subcommittee charged that Chairman Chudoff publicly impugned the "motives and integrity" of McKay, Davis, and Ralph A. Tudor, former Under Secretary, from the very start of the hearings beginning last May 10th. From that point on, they said, the Democrats conducted a one-sided investigation, climaxed by the recent majority report which, the GOP said, has a lot of "scare" words but no substance.

The Republicans said that what actually happened was that the Interior Department legally made some regulation changes "in the public interest." The minority said "The previous regulations were a deterrent to western development."

While it ranged into the administration's now-abandoned Dixon-Yates power project, the Tennessee Valley Authority, and other points in the public *versus* private power fight, the majority report dealt mainly with Interior Department regulation changes adopted August 11, 1954. According to the Democratic findings, the changes were "willfully" adopted as part of a policy to "subvert" federal laws aimed at giving first preference to rural electric co-operatives and public agencies in the marketing of federally produced power.

This was disputed by the Republicans, who said a document, described by the majority as an "anonymous" recommendation, prepared by private utility interests, was "fully identified" in the hearings. They said the Interior Department

had solicited it as a statement of "the current views" of more than a dozen private utilities.

The majority report said the most important regulatory change repealed the government's right to use excess capacity on private power lines across federal lands to move federal power to federal preference customers.

ONE indirect result of the Chudoff investigation may be to spur Georgia co-operatives' efforts to end the Clark Hill dam power-marketing controversy on their own terms. The Democratic majority made much of an advisory ruling by Attorney General Brownell, holding that the Southeastern Power Administration could not make other arrangements for disposal of federal power from Clark Hill without first offering it directly to preference customers for a "reasonable" time. This ruling has encouraged Georgia co-ops to reassert demands for a federal transmission line between Clark Hill on the Georgia-South Carolina border and the Woodruff dam in Florida. The Georgia Power Company claims it would duplicate its existing line.

Nine Georgia Congressmen are putting pressure on Georgia Power by calling for an end to the three-year "impasse" over distribution of the power. They did not specifically endorse, however, a proposed \$150,000 appropriation to study the feasibility of federal transmission line construction.



### *TVA Fund Use Attacked*

TVA has embarked on a \$170,000,000 expansion of steam power plants without advising Congress, according to Comptroller General Joseph Campbell. Campbell, in a letter to Representative Taber (Republican, New York), said four



## WASHINGTON AND THE UTILITIES

of the new steam power units have not even been cleared by the Budget Bureau. The funds would come from TVA's own power revenues. Campbell's disclosure climaxed a recent hot congressional row over whether TVA can use its revenue for building more steam power units. Taber, ranking Republican on the House Appropriations Committee, said Campbell's "astounding report" shows TVA's "utter disregard for Congress. This action of TVA appears to be a calculated attempt to deceive the . . . committee at a time when important decisions on TVA appropriations were being reviewed." Chairman Cannon (Democrat, Missouri) denied Taber's charge.

Present law does not give Congress effective control over TVA spending, according to Campbell. Congress could best get this control by requiring TVA to get specific appropriation authority for its spending plans, he observed. He advised Congress that even if it wants TVA to use its own power revenues or funds from any other sources — such as bonds — to build new power facilities, it should, nevertheless, require TVA to obtain prior and specific authorization from Congress for such facilities. This view of the Comptroller General may precipitate a more definite showdown in Congress on the general question of whether TVA should have discretion as to the disposition of its own funds.

**C**HAIRMAN Cannon took a political tone in disputing Comptroller General Campbell's views about the validity of TVA use of its own revenues to build new plant facilities. He brought in the Comptroller General's personal background, pointing out that Campbell was formerly a member of the AEC and approved the Dixon-Yates contract. Now, Cannon says, "we find the same Mr. Campbell tell-

ing the Congress it should repeal part of the TVA Act."

What the Comptroller General is actually seeking is "clarification" of certain parts of the TVA Act, rather than its repeal. The Comptroller General's letter to Representative Taber suggested that "the present law be amended to clearly state the intent of the Congress with respect to its control over TVA's capital expenditures for power facilities." Most of the debate in Congress seems to be over what form the financing of new TVA steam plant units will take, rather than whether TVA should expand its steam plant capacity. This situation may continue for some time and there is a possibility that during this period more and more Tennessee cities will look to their own devices and finance their own power-generating facilities.

### *Canadian Gas Line Problems*

**W**HILE the FPC hearings proceed at a deliberate pace on proposals for an exchange of natural gas at two Canadian border points, the prospect of financial difficulty further clouds the outlook. The FPC hearings involved proposals by Tennessee Gas Transmission Company and Trans-Canada Pipe Line, Ltd., to exchange natural gas at two points moving in opposite directions. Because of delay to date, there will be no spring commencement on construction.

The spring start on construction of the 2,250-mile, \$375,000,000 natural gas line from Alberta to eastern Canada once predicted has had to be abandoned in the face of a series of difficulties due only in part to deliberate FPC action. Some financing problems still have to be solved despite recent shifts under which three U. S. companies participating in Trans-Canada, including Tennessee Gas, Gulf Oil Company

## PUBLIC UTILITIES FORTNIGHTLY

(through Canadian Gulf Oil), and Continental Oil Company (through Hudson's Bay Oil & Gas Company), now hold 51 per cent of the voting stock.

The Canadian and Province of Ontario governments appear to be waiting on FPC developments before holding hearings and making a final decision on proposals under which a Crown company would be formed to build an uneconomic central portion of the line. Trans-Canada had to ask for (and received from) the Canadian Board of Transport Commissioners, an extension of its charter, which was due to expire April 30th.

During the hearings, a surprise offer of a \$1,000,000 interest-free loan was made to Trans-Canada by the Winnipeg Central Gas Company, whose vice president told the board that if all Canadian gas companies with a stake in future supplies of gas would give proportionate financial support, Trans-Canada would succeed.

**I**NCIDENTALLY, the management of the Peoples Gas Light & Coke Company of Chicago has indicated opposition to this particular plan for Canadian gas interchange. James F. Oates, Jr., chairman of Peoples Gas Light & Coke, made this comment at the annual stockholders' meeting of that company in Chicago on April 5th.

The reference to Canadian natural gas came as Oates told why Peoples is opposing the attempt of Midwestern Gas Transmission Company and Tennessee Gas Transmission Company to build a new pipeline. Opposition to this plan by the Peoples system is in the form of intervention before the Federal Power Commission.

Oates said construction of the proposed pipeline, designed to "raid" the markets of other established utilities, would be potentially harmful to all other customers of Peoples Gas and of the customer utility

companies supplied by long-distance pipelines which are part of the Peoples system. Sales revenue essential to serving wintertime house-heating customers would be lost, he asserted, as a result of the "raiding" tactics.

"Our appearance before the Federal Power Commission in opposition to the Tennessee-Midwestern proposal does not involve or reflect the slightest hostility to the importation of Canadian gas," Oates explained. "Both in the United States and in Canada there is tremendous interest in the justifiable desires of western Canadian gas producers for markets. Eastern Canada needs adequate gas supplies. Peoples Gas shares in this interest." (See, also, PUBLIC UTILITIES FORTNIGHTLY, April 12, 1956, issue, page 538.)

### *New Gas Bill Rumors*

**N**EWSPAPER columnists and others continue to circulate reports that President Eisenhower will take the lead, if re-elected, in reviving legislation to ease FPC regulation of gas producers. Rumors, alleged to stem from White House sources, suggest that the President may send a special message on the subject to Congress early next year. So far, any trustworthy foundation for such reports has been lacking. There is a feeling among Washington observers that general suggestions of administration support may have been made to those interested in solving the problems of gas producer regulation by corrective legislation. There is also a somewhat cynical feeling in some quarters that such suggestions may be politically inspired to appeal to the Southwest. But, recalling the President's approval of the general objectives of the bill, as contained in his veto message, it is quite likely that the Eisenhower administration, if returned to office, will take the initiative in clarifying the present muddled situation.

# Wire and Wireless Communication



## *REA Revamps Phone Program Areas*

GEOGRAPHICAL areas for administration of REA's rural telephone program have been increased in number to handle the growing work load, the U. S. Department of Agriculture announced late last month. In the future, REA will have eight sectional staffs in place of the present five in each of its two telephone divisions. As in the past, the section staffs will have headquarters in Washington, D. C., with field personnel traveling among borrower offices as required.

Ancher Nelsen, Administrator of REA, said the new 8-section pattern will distribute the work load more evenly and reduce the number of borrowers for which each section is responsible. He stated:

Under the previous 5-section setup, the number of borrowers and applicants per section ranged from 82 to 136. In the new arrangement, the range is from 63 to 79. This means that our people can better meet the present and prospective needs of the program. If and when the need arises for further changes, we will make them.

Now six and one-half years old, the REA telephone program has approximately 430 borrowers. They include in-

dependent companies, co-operatives, and mutual associations which have loans to bring new or improved telephone service to about 630,000 rural subscribers.

More than half of the borrowers have entered the program in the past three years, and loans have risen sharply during that period. In March, 1953, they amounted to \$113,000,000; today, they total \$283,000,000. New borrowers are being added at the rate of more than 100 a year, and loans are being made at the record level of about \$80,000,000 a year. Construction also is moving at a rapid pace. More than 200 of the borrowers have facilities in operation and other systems are going into service every week, it was reported.

THE new REA sections are established for the telephone operations and loans and telephone engineering divisions. The states comprising each section are shown on the map, page 607.

For administrative purposes, §§ 1, 2, 3, and 8 will be grouped under one assistant chief and §§ 4, 5, 6, and 7 under another. The former designation of administrative groupings as the northern and southern regions is eliminated.

Administration of the rural electrification portion of the REA program was not affected by the changes.

## PUBLIC UTILITIES FORTNIGHTLY

### *TV Telephone Sales*

THE Bell system on April 8th launched a new nation-wide television program series over the Columbia Broadcasting System network. The new program will be known as "Telephone Time" and will appear on the network during a choice Sunday evening spot—6 o'clock. The series features a presentation of true human interest stories, dramatized by a professional cast, based on stories researched by John Nesbitt, famous narrator.

The commercial angle of the Bell system series will be to prod the sale of telephone service and appliances. The Hal Roach Studios in Hollywood produced the films to be used and the Philadelphia advertising firm of N. W. Ayer & Son, Inc., is handling the account. The brief commercial messages for telephone service and equipment promotion may be expected to benefit the telephone industry as a whole.

The Bell system is continuing its sponsorship of its well-known radio program the "Telephone Hour," which has gone out over the National Broadcasting Company system for sixteen years. This popular program of music classics, under the direction of Donald Voorhees, is now heard on 198 radio stations each Monday night at nine o'clock.

### *Houston Drops Rate Case*

A RECENT Texas supreme court decision knocked the props out from under the city of Houston's rate case against Southwestern Bell Telephone Company. This was claimed by City Attorney George Neal as he explained the city's abandonment of the court fight. Neal declared that the high court decision, rendered last November 16th, was one of the main reasons he advised abandonment of further litigation.

As a result of the decision, Neal

charged, former City Attorney Will Sears told David Searls, telephone company attorney, that "he was ready to throw in the sponge" on the case.

"The decision certainly knocked the props out of Sears' main argument in support of the so-called 'substantial evidence rule,'" Neal declared.

Sears denied that he had ever said he was ready to drop the case, but he admitted that the high court ruling knocked out one of his main points of argument. Searls refused comment on Neal's statement.

Sears' argument in the court fight was that the city council, in denying a phone rate increase in 1953, based its decision on "substantial" evidence and that the court was stopped from considering other evidence.

A supreme court decision in a Texas & New Orleans *v.* Texas Railroad Commission suit ruled out the substantial evidence rule and held that the "preponderance"—all of the evidence—was to be considered by the court.

MORE recently, the Texas supreme court, in a gas rate decision involving the city of Alvin, upheld the principle of present fair value—as distinguished from original cost value which the Texas Railroad Commission had attempted to use—saying it was the proper basis for rate fixing in Texas. Although the Texas commission has no jurisdiction over telephone rate making, there was some feeling that the precedent set by the highest state court in the gas case would further diminish the chances of success of the city's litigation over telephone rates.

The city council canceled further prosecution of the city's appeal of the rate case to the court of civil appeals at Galveston. Further raises in telephone rates, other than basic residential rates, were forecast for Houston by Southwestern Bell's division manager.

## WIRE AND WIRELESS COMMUNICATION

## AT&T Patents Sought

**A**SSISTANT Attorney General Stanley N. Barnes told Congress recently that there are already "substantial signs" that other firms will benefit from the antitrust consent agreement the government signed early this year with the American Telephone and Telegraph Company.

On the basis of inquiries, coming into the Justice Department, he said, "it appears likely that several new concerns will enter the business of furnishing private communications systems" to industrial firms, local police departments, and other state agencies.

Under the terms of the consent judgment, Bell system operating companies have to stop running private communications systems which are not subject to any kind of rate regulation. The free patent

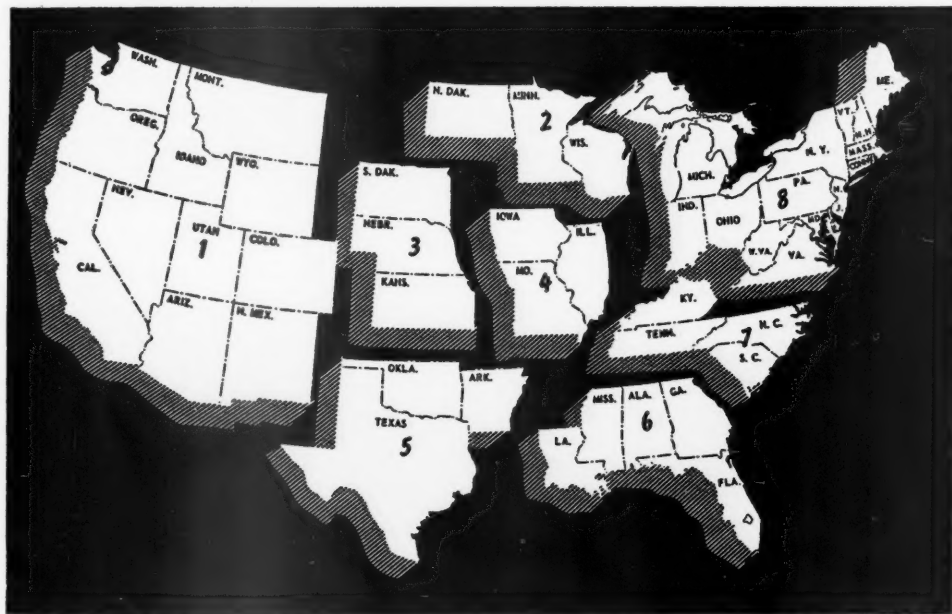
licensing provisions of the consent decree, Judge Barnes said, have already resulted in 92 "definite" inquiries from interested firms which have not in the past sought use of these patents.

Judge Barnes defended the AT&T settlement in a lengthy appearance before a subcommittee of the House Small Business Committee, headed by Representative James Roosevelt (Democrat, California). Representative Roosevelt charged that the government had abandoned "the heart" of its complaint against AT&T when it settled the case without requiring the company to get rid of its production subsidiary, Western Electric.

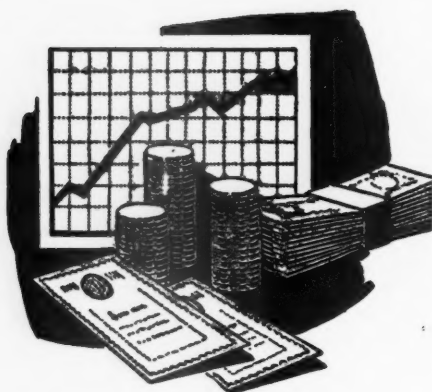
Judge Barnes countered that he settled without requiring divestiture of Western Electric because he felt that he could not have done any better if he had taken the case to trial.



### GEOGRAPHICAL SECTIONS IN REA TELEPHONE PROGRAM







## Financial News and Comment

By OWEN ELY

### *President of New York Stock Exchange Urges More Equity Financing*

**P**RESIDENT Keith Funston of the New York Stock Exchange, in a recent talk before the New York State Chamber of Commerce, pointed out the important rôle of the exchange in raising "new billions of growth money" each year for industry. Last year \$33 billion worth of stocks changed hands—a turnover exceeded only by two industries, food processing and wholesale and retail trade. In addition to new methods for improved service to the public installed by the exchange and its member houses, an extensive two-year study has been initiated to provide for meeting future needs.

Such a study is obviously necessary because of accelerating growth in the number of shares, if not in turnover. The number of listed shares passed the four billion mark recently, the first billion having been reached in 1930, the second around 1950, the third in 1954, and the latest recently. (Some of this increase was due to split-ups, of course.) With the rise of pension funds, investment trusts, and insurance companies as important market factors, it has become necessary to develop special new trading techniques to meet institutional needs.

Under Mr. Funston's leadership, the exchange has made a real effort to study our potential investment market, and has made some remarkable findings. For example, it was discovered that four out of five business and professional men with earnings of over \$7,500 a year are not share owners. Still more surprising is the fact that three out of four adults are unable to define a common stock. These findings disclosed the need for active leadership by the exchange in a campaign for broader knowledge and ownership of securities.

**T**HE exchange also favors increased equity financing and reduced debt financing by industry, as well as realistic tax reforms to encourage broader investment. Mr. Funston remarked:

This country has a unique predisposi-

#### DEPARTMENT INDEX

	<i>Page</i>
President of New York Stock Exchange Urges More Equity Financing ....	608
Chart—Yields on Utility Securities ..	610
Atomic Reactors Stymied by Insurance Obstacles? .....	611
Money Turns Tight, Bonds Weaken ..	611
Table—First-quarter Financing .....	612
Table—March Utility Financing .....	613
Tables—Financial Data on Gas, Telephone, Transit, and Water Stocks ..	614, 615, 616

## FINANCIAL NEWS AND COMMENT

tion for urging people to invest on the one hand, and then on the other—through ill-advised and restrictive taxes—for discouraging their investments. A whopping penalty for successful investing is levied through the capital gains tax. And the unsuccessful investor? We are not too solicitous of him either. For he is afforded inadequate tax consideration.

Quite apart from capital gains, people are urged to build sound investment programs that stress the benefits of dividend income. But the investor finds that after corporate profits are taxed at the source, his share of the profits—his dividends—are taxed a second time as part of his income. It is not too surprising that out of this paradoxical and unfair tax structure we find a confused and often reluctant body of investors; a perceptibly low percentage of savings dollars going into stock ownership; a reluctance on the part of corporations to raise money through new issues of common stock; and an investment climate sufficiently chilly to discourage many investors altogether.

Congress, it is true, gave partial relief from the double tax on dividends in 1954, but this should be only a beginning.

**R**EFERRING to the need for more equity borrowing, he pointed out that during the past decade corporations borrowed \$3 for every dollar raised through new stock issues. Over the coming decade he estimated that at least \$60 billion new equity money will be needed, about three times the amount raised in the past decade. If this program is to be carried out, however, it will be necessary to convert millions of potential investors into stockholders and also to persuade management to "travel the equity road." Both these objectives are being sought by the New York

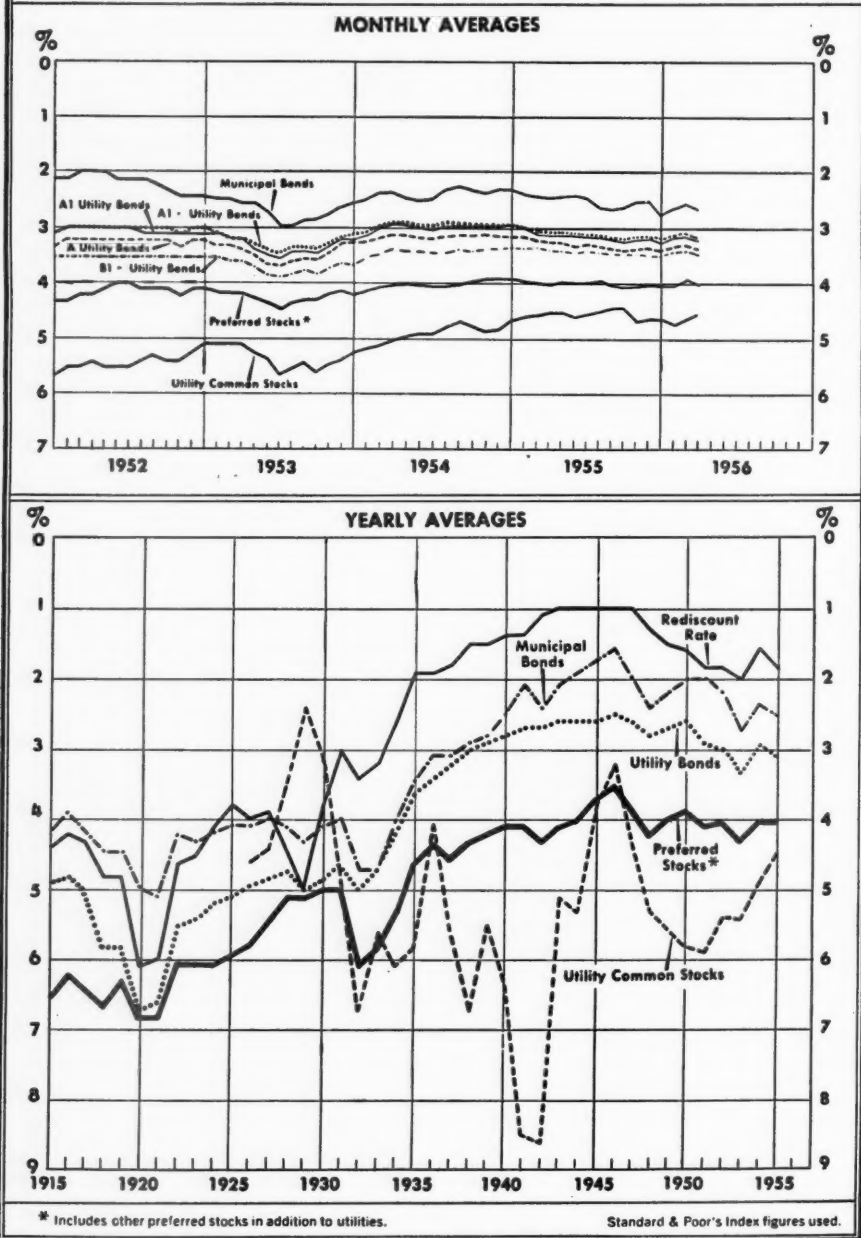
Stock Exchange through its public relations and advertising programs. It is seeking to reach some 20,000,000 families which have insurance protection, government bonds, steady jobs, and incomes of \$5,000 a year and over. "If these people are alerted and willing to seize investment opportunities . . . we shall have created a 'People's Capitalism.' "

Among the exchange's educational methods are the following: (1) Setting up local investors' information programs and speakers' bureaus in some 40 cities, co-operating with chambers of commerce, civic groups, and educational organizations. (It is hoped to extend this to 200 communities.) (2) An expanded flow of educational material for newspapers, magazines, TV, and radio stations. (3) New films designed to tell the investment story persuasively and entertainingly. (4) Revamping of the monthly magazine *The Exchange*, which now has a paid circulation of 100,000. Investors are urged to get the facts, seek advice, deal with reputable brokers, keep cash reserves to offset market risks, and avoid "get-rich-quick" schemes. The Monthly Investment Plan (MIP) permits thousands of small investors to make stock purchases on a regular basis for as little as \$40 per month or per quarter. Eleven states, including New York, have now passed a law sponsored by the exchange which will permit stock gifts to children without the red tape formerly involved, and others are expected to follow.

**M**R. FUNSTON feels that we are experiencing a predominantly long-term investment market, with only moderate use of credit. He considers the recent volume of trading of nearly 3,000,000 shares a day as necessary to maintain minimum liquidity, as well as to continue the 20 per cent annual turnover ratio characteristic

# PUBLIC UTILITIES FORTNIGHTLY

## HISTORICAL YIELD TRENDS OF UTILITY SECURITIES



## FINANCIAL NEWS AND COMMENT

of markets over the last two decades. The number of shareholders, found to be only 6,500,000 in 1952, had increased by about 1,000,000 three years later, and a new census is now being taken. He hopes that by 1965 some 12,500,000 people will be stockholders.

Summarizing, he stressed the Stock Exchange's problems as follows: attracting more qualified member firms; encouraging more companies to list their shares, and to finance their growth through stock issues; obtaining tax relief to bring out more venture capital; improving the handling of institutional funds; providing proper financial incentives generally.

### *Money Turns Tight, Bonds Weaken*

**A**FTER making a good showing in the first two months of the year, with prices advancing moderately, the bond market suddenly turned lower in March and April. Our chart of security yields (page 610) does not reflect this sudden reversal very well, since the last figures charted in the upper box are *averages* for the month of March, not the month-end figures. As of April 5th, Aaa bonds showed an average yield of 3.16 per cent *versus* 3.03 per cent a year ago; Aa issues averaged 3.24 *versus* 3.08; A 3.34 *versus* 3.15; and Baa 3.52 *versus* 3.40.

The immediate cause of the turnabout was the huge demand for commercial bank loans and the resulting tight supply of money and rising money rates. Business loans of New York city banks during March advanced nearly a billion dollars, to a level about \$2,250,000,000 over last year. Basically, the demand for money resulted from the tremendous impetus given to the industrial building program by President Eisenhower's announcement that he would run again. Business now

plans to spend nearly \$35 billion on construction this year, one-fifth more than last year—much more than offsetting the drop in residential housing "starts" and the dip in auto production. Inventory building, also stimulated by renewed confidence, rose to a record high of \$47.1 billion at the end of February, 8 per cent over a year ago. General Electric announced it would borrow \$300,000,000 for expansion, and AT&T reported a \$250,000,000 debenture offering scheduled for June. On top of this came the usual demand for income tax cash (corporate March 15th, personal April 15th). And while security loans are not the factor they used to be, they were mildly stimulated by the bull market in stocks—until the rate on brokers' loans was raised to 4 per cent, the highest rate since 1933.

**T**HE new issue market, particularly the utility section, was hard hit. During March five out of six utility bond issues and three out of four preferred stock issues were reported "slow." The heavy second-quarter financing schedule has been subject to some hurried revision. Tidewater Associated decided to issue \$50,000,000 instead of \$100,000,000 debentures. Portland Gas & Coke decided to sell only \$3,300,000 new-money bonds, deferring a \$16,000,000 refunding operation. Two recent quality issues were "broken" by the syndicates: Narragansett Electric 3½s had been offered at 102.44 but dipped to 100½ bid. Louisiana Power & Light \$4.44 preferred stock was at 102.06 but dropped to 99½.

### *Atomic Reactors Stymied by Insurance Obstacle?*

**O**NE of the toughest problems faced by the budding atomic energy industry—in which both the government and the

# PUBLIC UTILITIES FORTNIGHTLY

PUBLIC UTILITIES SECURITIES OFFERED FOR SUBSCRIPTION AND/OR SALE (000 omitted)									
	January 1 to March 31, 1956				January 1 to March 31, 1955				
	Total	Electric Companies	Gas Companies	Telephone Companies	Other Companies	Total	Electric Companies	Gas Companies	Telephone Companies
Long-Term Debt Offered Publicly	\$258,160	\$182,000	\$ 1,160	\$115,000	-	\$321,500	\$283,000	-	\$38,500
Offered through Subscription	-	-	-	-	-	-	-	-	-
Offered Privately	61,815	-	27,615	27,000	\$7,200	60,050	23,300	\$18,250	19,500
Total	\$319,975	\$182,000	\$28,775	\$142,000	\$7,200	\$381,550	\$306,300	\$18,250	\$58,000
Preferred Stock Offered Publicly	\$114,377	\$60,000	\$40,000	\$ 14,377	-	\$ 49,050	\$ 39,825	-	\$ 9,225
Offered through Subscription	5,066	-	5,066	-	-	-	-	-	-
Offered Privately	3,800	-	-	3,800	-	15,250	5,000	\$10,000	250
Total	\$123,243	\$60,000	\$45,066	\$18,177	\$ 300	\$ 64,300	\$ 44,825	\$10,000	\$ 3,475
Common Stock Offered Publicly	\$24,721	\$ 21,304	\$ 487	\$ 2,850	-	\$ 87,345	\$ 73,402	-	\$ 13,943
Offered through Subscription	47,445	23,753	5,533	18,159	-	56,208	28,904	9,593	\$15,710
Total	\$72,166	\$45,057	\$ 6,020	\$21,009	-	\$143,553	\$102,306	\$17,396	\$29,653
Total Financing	\$515,394	\$247,137	\$79,861	\$180,886	\$7,500	\$599,483	\$453,431	\$41,606	\$77,590
SEGREGATION OF FINANCING - BY PURPOSE									
Total Refundings	\$ 49,372	-	\$13,095	\$ 34,377	-	\$103,180	\$ 76,750	\$ 4,690	\$21,750
Total Divestments	-	-	-	-	-	\$ 19,088	-	\$15,848	\$ 3,240
New Money	\$85,980	\$112,000	\$11,780	\$122,000	\$7,200	\$290,220	\$238,900	\$ 9,570	\$41,750
Long-Term Debt	108,866	60,000	45,066	3,500	300	12,450	35,475	-	1,350
Preferred Stock	72,166	45,137	6,020	21,009	-	136,605	11,508	\$15,710	5,051
Common Stock	\$85,980	\$112,000	\$11,780	\$122,000	\$7,200	\$290,220	\$238,900	\$ 9,570	\$41,750
Total New Money	\$267,012	\$267,137	\$65,866	\$186,509	\$7,500	\$467,275	\$376,681	\$21,078	\$13,676
Total Financing	\$515,394	\$247,137	\$79,861	\$180,886	\$7,500	\$599,483	\$453,431	\$41,606	\$77,590
SEGREGATION OF FINANCING - BY TYPE									
Competitive Bidding	\$293,275	\$178,275	-	\$115,000	-	\$355,106	\$312,312	\$ 5,794	\$37,000
Negotiated Sales	\$103,083	\$ 45,109	\$41,617	\$ 17,227*	-	\$ 72,789	\$ 53,915	\$ 1,969	\$11,805
Subscription	16,304	\$11,248	\$ 5,066	\$ 9,083	-	\$ 30,829	\$19,408	-	-
Competitive Bidding	27,131	12,515	5,533	9,076	-	23,559	9,146	-	-
Negotiated Sales	9,076	-	-	-	-	-	-	-	-
No Underwriting	\$ 52,511	\$23,753	\$10,599	\$18,159	-	\$ 56,208	\$28,904	\$ 9,593	\$15,710
Total Subscription	\$ 52,511	\$23,753	\$10,599	\$18,159	-	\$ 56,208	\$28,904	\$ 9,593	\$15,710
Private Sales	\$ 65,615	-	\$27,615	\$ 30,000	\$7,500	\$ 75,300	\$28,350	\$19,750	\$ 3,000
Total Financing	\$515,394	\$247,137	\$79,861	\$180,886	\$7,500	\$599,483	\$453,431	\$41,606	\$77,590

\* Includes \$18,377,000 preferred stock not underwritten.

Ebasco Services Incorporated, Corporate Finance Department, April 2, 1956



## FINANCIAL NEWS AND COMMENT

electric utilities now have a substantial stake—has been the question of insuring the general public against disaster if a reactor should get out of hand. There is, of course, no danger of any vast explosion of the hydrogen bomb type, but nevertheless even a small affair might scatter some radioactive material over a fairly wide area. The chances are probably extremely remote that this could happen but even a "one-in-a-billion" possibility is enough to worry the industry.

The AEC staged a miniature test accident at its Arco, Idaho, reactor in July, 1954. The reactor blew itself to pieces but the dangerous fall-out extended for only a few hundred feet. (For a pictorial account, see *Business Week* of March 10, 1956.) More recently a real accident occurred at the same location when someone probably "pressed the wrong button" and

the reactor apparently melted down; whether there was any spread of radioactive material has not yet been indicated. Other than these actions, no difficulties with other small reactors in this country have been reported since the first one was built in 1942. However, the large Canadian plant at Chalk River encountered a serious breakdown and plant contamination some time ago; operating in an isolated area there was apparently no fall-out danger.

Two large groups of insurance companies earlier this year offered the atomic energy industry various kinds of insurance aggregating about \$65,000,000 for each individual plant. But, according to *Business Week*, planners of atomic reactors would like perhaps \$100-\$200,000,000 coverage. They are reported hopeful that the government will enter the picture,



### MARCH UTILITY FINANCING

#### PRINCIPAL PUBLIC OFFERINGS OF ELECTRIC AND GAS UTILITY SECURITIES

Date	Amount	Description	Price To Public	Underwriting Spread	Offering Yield	Moody Rating	Indicated Success of Offering
<i>Bonds</i>							
3/2	\$ 4.0	Mississippi P. 1st 3½s 1986 .....	102.25	.49C	3.27%	A	d
3/8	30.0	Houston L. & P. 1st 3½s 1986 .....	101.15	.55C	3.19	Aa	d
3/16	14.0	Alabama Power 1st 3½s 1986 .....	102.82	.56C	3.35	A	d
3/20	1.0	Nevada Nat. Gas P. L. Sub S. F. Deb. 5½s 1976, with common* .....	50.50	4.25N	—	—	a
3/22	25.0	Pacific G. & E. 1st 3½s 1988 .....	101.13	.57C	3.32	Aa	d
3/23	10.0	Narragansett Elec. 1st 3½s 1986 ....	102.44	.64C	3.37	Aa	d
3/29	12.0	Georgia Pwr. 1st 3½s 1986 .....	101.38	.75C	3.55	A	a
<i>Preferred Stocks</i>							
3/2	4.0	Mississippi Power 4.40% Pfd. ....	102.32	1.69C	4.30		d
3/2	10.0	Nor. States Power \$4.16 Pfd. ....	101.75	1.69C	4.09		d
3/15	5.0	Laclede Gas Conv. 4.32% Pfd. (\$25 par) .....	25.00	.04C	4.32		**
3/21	7.0	Louisiana P. & L. 4.44% Pfd. ....	102.06	1.73C	4.35		d
<i>Common Stock—Offered by Subscription</i>							
3/1	.3	Colorado Central Power .....	26.50	—	4.53	Earns.-Price Ratio 6.58	g
3/2	11.2	Northern States Power .....	16.75	.05C	5.37	6.94	h
3/6	5.5	Washington Gas Light .....	37.00	.35N	5.41	8.06	i
3/9	10.1	Oklahoma G. & E. ....	34.00	—N	5.00	7.04	j

\*Offered in units of \$25 debentures and 4 shares of common stock for \$50.50. \*\*Offered to stockholders on a 1-for-15 basis. Stock convertible into 1½ shares of common to March 31, 1966. a—It is reported that the issue was well received. d—It is reported that the issue sold slowly. g—Offered on a 1-for-24 basis. h—Offered on a 1-for-20 basis. Eighty-eight per cent subscribed. i—Offered on a 1-for-8 basis. Ninety-five per cent subscribed. j—Offered on a 1-for-10 basis; up to 15,000 shares of unsubscribed stock to be offered to employees and pension trust. Offering 99 per cent subscribed.

# PUBLIC UTILITIES FORTNIGHTLY

and the Joint Congressional Committee on Atomic Energy is said to be considering special legislation. If this report is true, it would seem important to expedite the bill so as to get construction of the new reactors under way as soon as possible. The proposal is apparently that the government insure the plant on an overriding basis—the private insurance groups would have the primary responsibility.

Some other recent developments in the atomic energy field have been the following:

(1) Three leading Florida utilities (Florida Power & Light, Florida Power Corporation, and Tampa Electric) propose to build a full-scale atomic plant. These utilities, since they do not have a supply of natural gas for boiler fuel, do not currently have the low power costs that many other southern utilities enjoy. For example, Florida P&L's *operating* cost for generating power in 1954 approximated 5.5 mills compared with 1.9 mills for the Texas Utilities System.

(2) General Electric has decided to build a small (5,000-kilowatt) prototype plant near Livermore, California, to test its so-called dual-cycle boiling water reactor. Pacific Gas and Electric will co-operate with General Electric and use the power. Reference has been made in this department to GE's estimate that the 180,000-kilowatt plant which it plans to build near Chicago for operation by Commonwealth Edison will be able to produce power at 100 per cent load factor at an over-all cost of only 6 or 7 mills—thus competing with coal-burning plants in that area. The AEC has not "backed up" this estimate, however, and the Joint Congressional Committee is therefore apparently skeptical of General Electric's claims.

Presumably, the GE small prototype plant, which can be completed in a year or so, is designed to verify these operating cost estimates, as well as to help perfect plans for construction of the Illinois plant, when the latter is fully licensed by the AEC.



## RECENT FINANCIAL DATA ON GAS UTILITY STOCKS

Rev. (Mill.)			4/4/56 Price About	Divi- dend Rate	Approx. Yield	— Share Earnings* —			Price- Earnings Ratio	Div. Pay- out	Approx. Common Stock Equity
						Cur- rent Period	% In- crease	12 Mos. Ended			
Pipelines											
\$ 4	O	Alabama-Tenn. Nat. Gas	19	\$.80h	4.2%	\$1.35	7%	Dec.	14.1	59%	37%
15	O	Commonwealth Nat. Gas	30	1.20	4.0	2.61	9	Dec.	11.5	46	45
14	O	East. Tenn. Nat. Gas ....	10	.60	6.0	.62	41	Dec.	16.1	97	14
48	S	Mississippi Riv. Fuel ....	33	1.40	4.2	2.02	15	Dec.	16.3	69	52
69	S	Southern Nat. Gas .....	35	1.80	5.1	2.37	32	Dec.	14.8	76	33
200	O	Tenn. Gas Trans. ....	29	1.40	4.8	1.76	35	Dec.	16.5	80	22
163	O	Texas East. Trans. ....	27	1.40	5.2	1.97	31	Dec.	13.7	71	23
68	O	Texas Gas Trans. ....	22	1.00	4.5	1.74	5	Dec.	12.6	57	27
75	O	Transcont. Gas P. L. ....	18	.90	5.0	1.15	14	Dec.	15.6	78	19
Averages					4.8%				14.6	70%	
Integrated Companies											
127	S	American Nat. Gas ....	62	\$2.20	3.5%	\$3.35	13%	Dec.	18.5	66%	35%
50	A	Arkansas-Louisiana Gas .	20	1.00	5.0	1.03	145	Dec.	19.4	97	53
30	O	Colo. Interstate Gas ....	63	1.25	2.0	3.99	87	Sept.	15.8	31	29
304	S	Columbia Gas System ....	16	.90	5.6	1.20	22	Dec.	13.3	75	44
9	O	Commonwealth Gas ....	7	(a)	4.0a	.55	13	Dec. '54	12.7	—	69
10	A	Consol. Gas Util. ....	14	.75	5.4	1.36	52	Jan.	10.3	55	53
240	S	Consol. Nat. Gas ....	37	1.70	4.6	2.86	18	Dec.	12.9	59	70
144	S	El Paso Nat. Gas ....	44	2.00	4.5	2.83	46	Nov.	15.5	71	22
40	S	Equitable Gas ....	27	1.40	5.2	2.03	12	Dec.	13.3	69	32
15	O	Kansas-Nebr. Nat. Gas .	35	1.60	4.6	2.38	83	Dec.	14.7	67	32

# FINANCIAL NEWS AND COMMENT

88	S	Lone Star Gas .....	30	1.60	5.3	2.15	18	Dec.	14.0	74	39
23	S	Montana-Dakota Util. ...	26	1.00	3.8	1.46	NC	Dec.	17.8	68	30
21	O	Mountain Fuel Supply ...	27	1.20	4.4	1.50	18	Dec.	18.0	80	59
72	S	National Fuel Gas .....	20	1.00	5.0	1.57	12	Dec.	12.7	64	58
108	S	Northern Nat. Gas .....	44	2.20	5.0	3.56	29	Dec.	12.4	62	34
37	S	Oklahoma Nat. Gas .....	27	1.40	5.2	2.17	41	Jan.	12.4	65	32
99	S	Panhandle East, P. L. ...	79	3.00	3.8	5.01	18	Dec.	15.8	60	32
10	O	Pennsylvania Gas .....	23	1.00	4.3	1.76	NC	Sept.	13.1	57	77
159	S	Peoples Gas Lt. & Coke .	158	8.00	5.1	11.40	15	Dec.	13.9	70	40
27	O	Southern Union Gas ....	23	1.12	4.9	1.33	39	Dec. '54	17.3	84	38
215	S	United Gas Corp. ....	31	1.50	4.8	2.03	D2	Dec.	15.3	74	41

Averages

4.6%

14.7

67%

## Retail Distributors

23	A	Alabama Gas .....	34	\$1.28	3.8%	\$2.22	18%	Feb.	15.3	58%	44%
38	O	Atlanta Gas Light .....	29	1.20	4.1	2.11	23	Sept.	13.7	57	40
5	O	Berkshire Gas .....	15	.80	5.3	.97	111	June	15.5	82	37
4	O	Bridgeport Gas .....	27	1.50	5.6	2.17	26	Dec.	12.4	69	44
4	O	Brockton-Taunton Gas ..	13	.70	5.4	.65	20	Dec. '54	20.0	108	44
55	S	Brooklyn Union Gas ....	34	1.80	5.3	2.70	8	Dec.	12.6	67	47
1	O	Cascade Nat. Gas .....	12	—	—	Deficit	—	Sept.	—	—	13
29	O	Central Elec. & Gas ....	16	.80	5.0	1.30	18	Sept.	12.3	62	16
11	O	Central Indiana Gas ....	13	.80(b)	6.2	.83	D18	Dec.	15.7	96	64
5	O	Chattanooga Gas .....	6	.30	5.0	.35	6	Nov.	17.1	86	43
61	O	Gas Service .....	24	1.36	5.7	1.85	—	Dec.	13.0	74	38
6	O	Hartford Gas .....	37	2.00	5.4	2.17	D30	Dec.	17.0	92	52
2	O	Haverhill Gas .....	49	2.60	5.3	3.27	9	Dec.	15.0	80	55
15	O	Houston Nat. Gas .....	26	1.00	3.9	1.82	D12	July	14.3	55	23
16	O	Indiana Gas & Water ...	18	.92	5.1	1.53	25	Feb.	11.8	60	47
6	A	Kings Co. Lighting ....	144	.90	6.2	1.12	D6	Dec.	12.9	80	28
40	S	Laclede Gas .....	15	.72	4.8	1.05	NC	Dec.	14.3	69	36
4	O	Michigan Gas Utils. ....	19	.90	4.7	1.31	5	Dec.	14.5	69	43
3	O	MidSouth Gas .....	12	—	—	.50	—	Dec. '54	24.0	—	30
37	O	Minneapolis Gas .....	25	1.30	5.2	1.64	9	Dec.	15.2	80	38
13	O	Mississippi Valley Gas ..	19	1.12(d)	5.9	1.68	15	Sept.	11.3	67	29
8	O	Mobile Gas Service .....	25	1.00	4.0	1.52	70	Sept.	16.4	66	31
7	O	New Haven Gas .....	30	1.60	5.3	2.58	38	Dec. '54	11.6	62	64
10	O	New Jersey Nat. Gas ...	22	1.20	5.5	1.90	19	Dec.	11.6	63	31
70	O	North, Illinois Gas .....	19	.80	4.2	1.30	28	Jan.	14.6	62	49
8	O	North Penn Gas .....	14	1.00	7.1	.83	D33	Dec.	16.9	120	57
183	S	Pacific Lighting .....	39	2.00	5.1	2.81	30	Dec.	13.9	71	44
15	O	Pioneer Natural Gas ....	27	1.32	4.9	1.89	10	Dec.	14.3	72	53
13	O	Portland Gas & Coke ...	35	.90	2.6	2.04	49	Dec.	17.2	44	40
2	O	Portland Gas Light .....	11	.75	6.8	1.22	13	Dec.	9.0	61	25
8	A	Providence Gas .....	104	.56	5.3	.52	27	Dec. '54	20.2	92	62
3	A	Rio Grande Valley Gas ..	3	.15	5.0	.26	12	Dec.	11.5	58	63
3	O	South Atlantic Gas .....	12	.70	5.8	.88	D5	Dec. '54	13.6	80	32
9	O	South Jersey Gas .....	24	1.30	5.4	1.69	7	Dec.	14.2	77	52
24	S	United Gas Impr. ....	36	2.00	5.6	2.15	2	Dec.	16.7	93	64
33	S	Washington Gas Light ..	39	2.00	5.1	2.98	19	Dec.	13.1	67	42
6	O	Wash. Nat. Gas .....	14	.40	2.9	.65	D11	June	—	62	60
6	O	Western Kentucky Gas ..	17	.60	3.5	1.13	5	Sept.	15.0	53	38

Averages

5.1%

14.7

73%

## RECENT FINANCIAL DATA ON TELEPHONE, TRANSIT, AND WATER STOCKS

Rev. (Mill.)			4/4/56 Price About	Divi- dend Rate	Approx. Yield	— Share Earnings* —			Price- Earnings Ratio	Div. Pay- out	Approx. Common Stock Equity
						Cur- rent Period	% In- crease	12 Mos. Ended			
Communications Companies											
Bell System											
\$5,297	S	Amer. T. & T. (Cons.) ..	183	\$9.00	4.9%	\$13.10**	10%	Dec.	14.0	69%	64%
220	A	Bell Tel. of Canada ....	50	2.00	4.0	2.43	5	Dec. '54	20.6	82	63
37	O	Cin. & Sub. Bell Tel. ....	91	4.50	4.9	5.16	26	Dec. '54	17.6	87	100
187	A	Mountain Sts. T. & T. ...	134	6.60	4.9	8.88	23	Dec.	15.1	74	78
285	A	New England T. & T. ...	139	8.00	5.8	8.95	14	Dec.	15.5	89	60
715	S	Pacific Tel. & Tel. ....	139	7.00	5.0	8.67	21	Feb.	16.0	81	58

# PUBLIC UTILITIES FORTNIGHTLY

89	O	So. New England Tel. . .	40	2.00	5.0	2.11	D5	Dec.	19.0	95	64
Averages					4.9%				16.8	82%	
<i>Independents</i>											
—	O	Anglo-Canadian Tel. ....	30	\$ .60	2.0%	\$1.59	43%	Dec. '54	18.9	38%	—
30	O	British Columbia Tel. ...	50	2.00	4.0	2.71	20	Dec. '54	18.5	74	34%
2	O	Calif. Interstate Tel. ....	13	.70	5.4	1.04	NC	Dec.	12.5	67	34
11	O	Calif. Water & Tel. ....	19	1.00	5.3	1.34	14	July	14.2	75	36
12	O	Central Telephone ....	23	1.00	4.3	1.91	34	Sept.	12.0	52	23
3	O	Commonwealth Tel. ....	15	.80	5.3	1.12	67	Dec. '54	13.4	71	35
38	O	Continental Tel. ....	37	1.20	3.2	2.07	38	Dec.	17.9	58	23
3	O	Florida Telephone ....	20	.80	4.0	1.07	40	Dec. '54	18.7	75	41
210	S	General Telephone ....	45	1.60	3.6	2.63	27	Dec.	17.1	61	34
5	O	Inter-Mountain Tel. ....	15	.80	5.3	.95	9	Dec.	15.8	84	55
19	S	Peninsular Tel. ....	39	1.80	4.6	2.38	19	Dec.	16.1	76	46
19	O	Rochester Tel. ....	20	1.00	5.0	1.45	48	Dec.	13.8	69	34
3	O	Southeastern Tel. ....	17	.90	5.3	1.36	43	Sept.	12.5	66	52
7	O	Southwestern States ....	19	1.12	5.9	1.37	31	Dec.	13.9	82	34
24	O	United Utilities ....	23	1.20	5.2	1.71	17	Dec.	13.5	70	33
1	O	West. Carolina Tel. ....	15	.70	4.7	1.18	17	Dec.	12.7	59	52
10	O	West. Coast Tel. ....	19	1.00	5.3	1.21	13	Sept.	15.7	83	42
242	S	Western Union Tel. ....	20	1.00	5.0	2.10	39	Dec.	9.5	48	85
Averages									14.8	67%	
<i>Transit Companies</i>											
22	O	Baltimore Transit ....	13	\$1.60	12.3%	\$1.27	120%	Dec.	10.2	126%	40%
13	O	Cincinnati Transit ....	5	.30	6.0	.34	16	Dec.	14.7	88	43
9	O	Dallas Transit ....	7	.35	5.0	1.10	21	Dec. '54	6.4	32	71
225	S	Greyhound Corp. ....	15	1.00	6.7	1.18	D12	Dec.	12.7	85	52
21	O	Los Angeles Transit ....	15	1.00	6.7	.94	D5	Dec.	16.0	106	89
27	S	Nat. City Lines ....	21	1.60	7.6	2.74	D1	Dec.	7.7	58	93
26	S	N. Y. City Omnibus ....	27	2.00	7.4	2.71E	NA	June	10.0	74	85
13	O	Niagara Frontier Trans. .	8½	.15	1.8	.09	D95	Dec. '54	—	167	82
70	O	Phila. Transit ....	17	.30	1.8	1.27	390	Dec.	13.4	24	42
7	O	Rochester Transit ....	5	.40	8.0	.44	D23	Dec. '54	11.4	91	38
25	O	St. Louis P. S. ....	13	1.40	10.8	.68	D15	Dec.	19.1	206	87
17	S	Twin City R. T. ....	16	1.60	10.0	Deficit	—	Dec. '54	—	—	43
23	O	United Transit ....	6	—	—	.53	D28	Dec. '54	11.3	—	44
Averages					6.5%				11.2	96%	
<i>Water Companies</i>											
<i>Holding Companies</i>											
34	S	American Water Wks. . .	9½	\$ .50	5.3%	\$ .97	10%	Dec.	9.8	52%	16%
4	O	N. Y. Water Service ....	70	.80	1.1	2.10	50	Sept.	—	38	32
<i>Operating Companies</i>											
4	O	Bridgeport Hydraulic ...	30	\$1.60	5.3%	\$1.49	D5%	Dec. '54	20.1	107%	53%
11	O	Calif. Water Service ....	42	2.20	5.2	2.70	10	Feb.	15.6	81	29
2	O	Elizabethtown Water ...	34	1.00	2.9	1.27	D5	Dec. '54	—	79	—
8	S	Hackensack Water ....	43	2.00	4.7	3.26	D8	Dec. '54	13.2	—	40
7	O	Indianapolis Water A ...	39	.80	2.1	2.68	48	Dec. '54	14.6	30	33
5	O	Jamaica Water ....	39	1.80	4.6	2.90	—	Dec.	13.4	62	25
4	O	New Haven Water ....	58	3.00	5.2	3.32	D3	Dec.	17.5	90	63
2	O	Ohio Water Service ....	27	1.50	5.6	2.27	24	Dec.	11.9	66	38
6	O	Phila. & Sub. Water ...	33	.50(e)	1.5	2.45	—	Dec. '54	13.5	20	22
2	O	Plainfield Un. Water ...	62	3.00	4.8	4.00	8	Dec. '54	15.5	75	—
3	O	San Jose Water ....	50	2.00	4.0	3.33	8	Feb.	15.0	60	43
9	O	Scranton-Springbrook ...	19	.90	4.7	1.31	D2	Sept.	14.5	69	35
4	O	Southern Calif. Water ...	15	.80	5.3	1.08	27	Dec.	13.9	74	34
3	O	West Va.-Water Serv. . .	30	1.40	4.7	1.40	—	Dec.	—	100	17
Averages					4.3%				14.9	70%	

A—American Stock Exchange. O—Over-counter or out-of-town exchange. S—New York Stock Exchange. \*Earnings are calculated on present number of shares outstanding, except as otherwise indicated. \*\*On average shares. (a)—Paid 4 per cent stock dividend. (b)—Paid 10 per cent stock dividend. (c)—Paid 5 per cent stock dividend. (d)—Paid 25 per cent stock dividend. (e)—Also paid 5 per cent stock dividend. (h)—Paid 25 per cent stock dividend. NC—Not comparable. NA—Not available. E—Estimated.



## What Others Think

### Atom Sweepstakes

**"T**HE undercover fight in atomic energy is between private and public power."

This is an opinion held by *The Wall Street Journal* columnist John Chamberlin, but it is widely circulated and accepted by others. Mr. Chamberlin said in his column of March 22nd that it is the view, "usually put forth sotto voce," that one encounters in most of the circles which have to do with the peacetime atom. The columnist finds that it is seldom offered for attribution; everybody, on the surface, is for any action, whether publicly or privately financed or controlled, that will "advance the art" of atomic power reactor building. Nevertheless, he says the jockeying for position to take advantage of the peacetime atom goes on, a salient part of the broader struggle between the partisans of private and public power development.

The back-of-stage battle is reflected and translated into day-to-day maneuvering along certain lines which *The Wall Street Journal* writer characterized as follows:

At the moment the fight masks itself as one between quantity and quality. Public power groups, scenting big federal subsidies, are arguing for a "crash," or all-out, program of reactor building that will make total kilowattage its final criterion. Private groups, who see no

point in building for mere kilowattage as long as coal offers cheaper and more efficient power, would prefer to see a few qualitatively good reactors perfected before they commit money and energy to the shift to a new source of electric current.

Throughout the present year the battle is likely to take on an increased intensity. For by contrast with 1955, 1956 promises to be a period of seeming frustration on the nuclear front. Great projects will continue to be announced, but practically no project, whether old or new, will be completed in the U. S. within the year.

**T**HE columnist remarked that of the seven big nuclear reactors that have been figuratively blessed by the Atomic Energy Commission, only one—the AEC's own Shippingport, Pennsylvania, pressurized water reactor—is within shouting distance of becoming a reality. He quoted Charles H. Weaver of Westinghouse Electric to the effect that 1956 will be a time of wrestling with technical problems. Atomic costs and the problem of insurance remain posers, too, added Mr. Chamberlin, and any private company wishing to stake out a claim on atomic horizons will have to deal with them.

Currently, only two private groups—the



## PUBLIC UTILITIES FORTNIGHTLY

Consolidated Edison Company of New York and the group headed by Commonwealth Edison of Chicago—have projects in the works which do not involve a cent of federal money. Mr. Chamberlin remarked that a third entry, the Pennsylvania Power & Light Company, is engaged in studying the possibility of financing a big reactor out of its own resources. The columnist summed up his over-all impression at this point, declaring: "This meagerness reflects the atmosphere of high-cost frustration that is putting steam in the boilers of those who would put the government smack into the atomic business on a broad front."

The columnist continued:

The advocates of public power have already articulated the drive. Speaking before the Joint Congressional Committee on Atomic Energy, William S. Peterson, chief engineer of the Los Angeles Department of Water and Power, who also serves as vice chairman of the American Public Power Association's atomic energy committee, has called for a huge outlay of federal funds to develop 100,000,000 kilowatts of atomic power by 1977.

Mr. Peterson speaks ostensibly for 800 local publicly owned electric systems in 40 states and in the territories of Puerto Rico and Alaska. His "crash" ideas are echoed inside the AEC itself by Commissioner Thomas Murray, who has asked for \$6 billion to build 12,000,000 kilowatts of atomic electric power capacity by 1965.

To buttress their drive for a federally financed crash program, the public power people point to the Russians, who boast they will have twice the nuclear power of the U. S. by 1960. England, too, is visualized as a threat; the British expect to have 17 atomic power plants by 1965 with a 2,000,000-kilowatt ca-

capacity, and their 90,000-kilowatt Calder Hall reactor is scheduled for completion this year. Present U. S. plans call for only 1,000,000 atomic kilowatts by 1965.

**I**N the considered opinion of private power partisans, shared by Mr. Chamberlin, the agitation for a crash—or "ramrod"—program developed at vast public expense would make sense only if it could be demonstrated that the Russians and the British propose to build power reactors of high quality, each calculated to carry the "state of the art" ahead in a swift, dramatic leap.

Neither the British nor the Russians, however, seem to have qualitative programs at the moment as the columnist analyzed the developments in these countries. British reactor designs call for cumbersome equipment which will utilize natural uranium, not the enriched uranium produced in the U. S. at AEC installations. As for the Russians, the equipment which they showed at the time of the Geneva Atomic Conference was workable, but in the opinion of experts it was hardly inspired.

Mr. Chamberlin said in recapitulation that if neither Britain nor Russia can quickly develop atomic power within the cost range of a good new American Gas & Electric Company coal-burning station there would seem to be scant cause for worry about how many atomic kilowatts they may have by 1965. The U. S. would remain ahead in the power race simply by relying on a still improving coal technology for its volume, in this view described by Mr. Chamberlin. He added:

According to this rationale, the U. S. should seek to cover the water front not by worrying about volume at high cost but by instigating a pursuit of quality

## WHAT OTHERS THINK

in each and every type of reactor.

This the AEC insists it is doing already. Whether it is moving fast enough to divest itself of red tape in the pursuit of quality is an open question, but no one can deny that the AEC's several reactor programs have variety. Its own five-year development program—ranging from the big Shippingport, Pennsylvania, plant to smaller experiments at Oak Ridge, Tennessee, and Arco, Idaho—includes reactors which utilize pressurized water, boiling water, and liquid sodium. One AEC reactor mixes fuel and moderator in a "homogeneous" liquid mass; still another promises to breed plutonium as a by-product of producing power.

And quite aside from its own small experimental power reactors, the AEC is entertaining seven applications from public and co-operatively owned power groups for the right to construct small reactors of various types at public expense. The Chugach Electric Association of Anchorage, Alaska, wishes to build a sodium-cooled heavy water moderated reactor; the city of Holyoke, Massachusetts, is bidding for the opportunity to experiment with a gas-cooled reactor with a closed cycle turbine. Other public groups and co-operatives have filed plans for still different types of reactors.

**T**HE big power plant program, a partnership affair between several power companies and the AEC, is also nicely calculated to test variety, according to *The Wall Street Journal* columnist. The group led by the Commonwealth Edison Company of Chicago, with General Electric as the builder, plans a 180,000-kilowatt dual-cycle boiling water reactor. Mr. Chamberlin also noted that Consolidated Edison of New York, with Babcock & Wilcox

doing the construction, plans a reactor which will use thorium in place of natural uranium as the "blanket" around the enriched uranium "seed," along with an oil-fired superheater designed to lift the temperature of the steam produced by fission-generated heat.

The columnist mentioned other groups with plans for big reactors—Detroit Edison, Consumer Public Power District of Nebraska, the Yankee Atomic Electric Company of New England, the Pennsylvania Power & Light Company, and several Florida companies. All have other atomic gimmicks which they wish to develop, Mr. Chamberlin declared.

Continuing his free-swinging survey of the field, the columnist found that

Of the small reactor groups, not one proposes to foot the bill for design or construction out of privately or even locally raised capital. The private companies which are going in for big reactors are split between those that wish to finance their own projects and those which are willing to take subsidies from the government.

But as long as the object is qualitative variety, some big companies will feel they can take a chance on putting up \$50,000,000 or more for something that may pay off handsomely in the long future.

If the AEC, however, should shift over to a quantitative crash program designed to match the British and the Russians for mere kilowatt volume, there would be less incentive for a private power company to take a chance.

**T**HE writer concluded his column of remarks on the atom picture by stating the warning of the private enterprisers that under crash circumstances every public power group in America would be bid-

## PUBLIC UTILITIES FORTNIGHTLY

ding for public money—and presumably getting it.

Since competition against that sort of thing would be impossible on a pri-

vate basis, the columnist declared, this could amount to the delivery of atomic electric power into the hands of government forever.

### Pipeliners and Archaeologists—A Modern Partnership

**T**RENCHING machines digging a ditch across parts of Idaho, Oregon, and Washington as a bed for a natural gas pipeline are uncovering traces of ancient cultures which may shed new light on the story of mankind on the North American continent.

The pipeline under construction is that of the Pacific Northwest Pipeline Corporation, which is to bring gas to Portland, Oregon, some time this summer and will subsequently connect with another line now being pushed southward from Canada. The route of the Pacific Northwest Pipeline project extends 1,487 miles from the San Juan basin in New Mexico to the Canadian border.

All along the way, the *Portland Oregonian* reports, archaeologists are working side by side with the pipeliners, cleaning, classifying, and evaluating every spear point, stone fireplace, or fragment of bone—artifacts that may one day prove to be missing pieces in the jigsaw puzzle of history.

One recent find, according to the newspaper, is a quarry where men long ago hacked out the material for stone weapons. Thousands of percussion-chipped flakes, leaf-shaped blades, many apparently broken in manufacture, and blade blanks 5 to 12 inches long have been found strewn among water-rolled boulders of fine-grained basalt.

Near Ignacio, Colorado, *The Oregonian* continues, ten ruins were uncovered in a space of ten miles and 34 cites of habitation were found, all identified as those of a pueblo-dwelling people who practiced a

primitive dry-land agriculture there about 700 A.D.

Dr. Jesse Nusbaum, senior archaeologist for the U. S. Department of Interior, is in charge of the archaeological work, the article states. Specialists from the University of Washington are co-workers.

Near Glens Ferry, Idaho, a surface search of two sites off the pipeline right of way yielded five projectile points, two of which have been identified as McKean points, first recognized in the northern great plain at sites dated at 6500-5000 B.C. and 2500-1500 B.C. Further exploration of the Idaho sites is planned when the pipeline job is finished and archaeologists do not have to hurry to keep up with the progress of the big ditch, according to *The Oregonian*.

**A**RCHAEOLOGICAL study in connection with the pipeline project is the result of a letter Dr. Nusbaum wrote to C. R. Williams, president of Pacific Northwest Pipeline Corporation, asking that archaeologists be allowed to scrutinize the things uncovered so that nothing of importance would be lost to science and the public.

The newspaper adds that in reply, Dr. Nusbaum received a telephone call from President Williams expressing a desire to co-operate in every way possible. In fact, Pacific Northwest is now supplying the archaeological field men with jeeps and other equipment, paying their salaries, and furnishing extra help when speedy salvage excavations are desirable.

Dr. Nusbaum is quoted by the newspaper to the effect that, thanks to the

# WHAT OTHERS THINK



pipeline, archaeologists are entering areas that they have never before explored or studied. "Prospects are excellent," he remarks.

*The Oregonian* points out that though archaeologists have traced man's presence in North America back 10,000 years, the questions of where and when the present race of humans originated, and how man got to this continent have not been answered.

One hypothesis with numerous adherents is that man crossed to North

America from Asia over a land bridge where the Aleutian chain now reaches across from Alaska almost to the coast of Siberia.

As the pipeliners' digging machines cut their long furrow across the Pacific Northwest, the newspaper article concludes, they may furnish archaeologists with buried treasures that will tell what kind of men were first in North America and what relation their culture had to that of Europe or Asia.

## The Woodpecker—Utility Problem

UTILITIES have turned to the nation's universities for help in their long-standing effort to outwit an unusual bird which each year sinks its slender beak into thousands of telephone and power transmission poles, causing them to sway dangerously and occasionally topple over altogether.

According to a *Wall Street Journal* article, by staff reporter Carter Henderson, four power companies now give Pennsylvania State College an annual research grant of \$1,000 to study *Dryocopus Pileatus*, the Latin name for the pileated woodpecker or cock of the woods. Another utility is discussing woodpecker woes with professors at Texas A&M, he reports.

Mr. Henderson explains that Gulf States Utilities Company, one of the utilities enlisting university aid, expects to spend a "young fortune" repairing last year's woodpecker damage. Another, the New Jersey Power & Light Company, predicts a \$5,000 loss from woodpecker attacks. Still a third, the Pennsylvania Power & Light Company, is getting ready to write off nearly \$15,000 against woodpecker destruction in 1955, compared with a loss of only \$4,000 in 1946.

If shotgun tactics could be used against the menace, Mr. Henderson adds, there might be no problem, but a special act of Congress protects these birds which, he says, also gobble up termites, carpenter ants, Englemann's beetles, and other tree-eating bugs. "U. S. game wardens stand ready . . . to slap a fine of up to \$500 plus a six months' stretch in federal prison on any impulsive utility man caught taking pot shots at woodpeckers. What's more, most states have their own stiff penalties for woodpecker molesters," he goes on.

As a result of what the *Journal* reporter describes as prowoodpecker senti-

ment, the tactics of the opposition have had to be devious. He writes:

Western Union, as one illustration, sent men around to cement up the woodpeckers' holes as fast as they were bored in hopes of frustrating further drilling. But the birds simply ignored the plugged holes and immediately went to work sinking new ones. Western Union even nailed imitation tin snakes to its poles, believing this would frighten the woodpeckers away. But the birds pecked on, occasionally nipping the phoney snakes.

Pennsylvania Power & Light decided a more subtle approach was needed. So it slapped red, green, yellow, and white paint on a few test poles on the theory that this would insult woodpeckers' artistic sensibility, causing them to shun the poles. Unfortunately, the peckers had no objection to hacking away at hued poles, even though they were put off for a few days by the garish display.

The American Telephone and Telegraph Company figured a psychological pitch might strike out the woodpeckers. "We decided to fill up old woodpecker borings with a light coating of chalking compound," says AT&T's timber products engineer, George Lumsden, "so that when the birds jabbed at them again their beaks would break through with so little effort it would shock them into a nervous breakdown." This ingenious plan was vetoed before it got started, however, because someone realized telephone linemen might mistakenly put their spikes into the chalked up cavities and fall off the poles.

As of this moment, the *Journal* reporter continues, the only way the utilities



## WHAT OTHERS THINK

have found to make their poles woodpecker proof is to wrap them with heavy-gauge steel webbing—a prohibitively expensive method except in remote areas where the unusually high cost of replacing a ruined pole makes it economically feasible.

As he sums up past experiments, the antiwoodpecker ruse dreamed up by the utility companies has “flopped — dismally.”

SINCE they are at loss for new ways of their own to keep the birds off poles without ruffling a feather on their heads, utility men have resorted to expert university assistance, according to Mr. Henderson.

He goes on to explain that the mystery which Pennsylvania Power & Light, Northern Penn Power, West Penn Power, and New Jersey Power & Light have hired Professor Jorgenson of Penn State to solve is a simple one. They would like to know why the woodpeckers, which are bug eaters, attack utility poles which are both creosoted and virtually bug free.

The reporter continues:

“The holes they drill aren’t the right shape for nests,” [Dr. Jorgenson] says, “nor do they resemble the holes bored in search of food.” There’s an outside chance the poles may be involved in the woodpecker’s love life; it’s a known fact the male bird will tap anything handy during courting season in order to attract the female. . . . Dr. Jorgenson [is] hopeful a new chemical compound can be found that smells so dreadful that peckers won’t go near it, or perhaps tastes so bad they’ll avoid sticking their beaks into poles impregnated with the stuff.

“Then too,” he adds, “there’s always the chance we’ll find something that will give the woodpeckers a skin irritation—like some people get from penicillin.”

Neither *The Wall Street Journal* reporter nor the Penn State professor were apparently aware of another effort to curb the woodpecker menace under the sponsorship of the Consumers Power Company.

*The Detroit News* reported on this experiment as follows:

How much wood would a woodpecker peck if a woodpecker had to peck fiberglass? None at all, say the experts. What he’ll get is a bent beak. The same applies to termites and other chomping pests.

That’s why Consumers Power Company has tested utility poles . . . made of fiberglass.

THE poles, the same size as the customary wooden ones, are so hard that nails cannot pierce them, according to *The Detroit News*. They are actually hollow tubes, 35 feet long and 11 inches in diameter. They weigh 150 pounds, compared to 450 pounds for cedar and 750 pounds for pine poles. The newspaper reports that two men can carry one pole, instead of the four- or six-man crew needed to handle a wooden one.

Since the fiberglass poles cannot be pierced by climbing irons, they are pre-drilled for metal “steps” which linemen insert as they climb the pole and remove as they come down. Provision is made for crossarms, also of fiberglass, which are attached by metal clamps, the newspaper explains.

—E. W. P.

## Does the Consumer Want Gas Producer Exemption?

THE general sentiment in the gas production industry is that any new attempt to formulate natural gas legislation will have to wait on the convening of a new Congress. But Senator Douglas (Democrat, Illinois) has recently announced that he is still willing to join any Senators who at the moment "may wish to push legislation for the relief of the truly small independent natural gas producers and to allow all producers rates of return comparable to their risks." It will be remembered that the Illinois Senator, who was one of the leading members of Senate opposition to the vetoed Harris-Fulbright Bill, has often expressed ideas of this sort.

Editorial support for this position has recently come from the *Denver Post* which has stated the belief that "some new natural gas legislation is desirable, although the Harris-Fulbright Bill, which would have enriched producers by removing them from all effective regulation, was not the proper answer."

In the view of the *Denver Post*, there is need for a law which would:

1. Exempt from regulation the thousands of small producers whose sales have little if any effect on the over-all price of gas to consumers while keeping under regulation the few large producers who are the price setters in the industry.

2. Provide for the regulation of the large producers on a basis which would recognize that the gas-producing business, unlike other utility businesses, involves certain risks in exploring for new gas supplies and should receive an appropriate price reward as a result.

The *Post* editorialist writes that this second purpose could be accomplished easily by giving the Federal Power Commission authority to give gas companies

a higher percentage of return on their investment than the 6 per cent (approximately) that is normally allowed electric power, telephone, and transportation utilities.

HE states that a bill containing these provisions would be in line with the idea expressed by President Eisenhower in his veto message. The President stressed the fact that suspicious circumstances surrounding the passage of the bill were the primary cause for his veto. But the *Post* writer remarks that the President went on to say that he wants a gas bill which would encourage the search for oil and include specific language protecting consumers in their right to fair prices.

In view of these remarks made by the President, the newspaper feels that he probably would have vetoed the Harris-Fulbright Bill even if the incident of the \$2,500 donation to a Senator's campaign fund had not arisen. It did not see anywhere in the vetoed bill any specific language protecting consumers.

The editorial continues:

Of course, a law exempting small producers from regulation and providing for prices in proportion to risks would not satisfy many of the oil and gas companies which have been exerting their influence on behalf of the Harris-Fulbright Bill.

Large producers would not want the little fellows exempted. These large producers hope to trade on the sympathy that Congressmen always feel for small businessmen. The big companies hope to receive more favorable consideration if they can keep all producers, large or small, under the same kind of regulation.

Neither would the vehement backers

## WHAT OTHERS THINK



"SEEMS TO ME WITH A LITTLE INGENUITY THEY COULD FIX THESE SO IT WOULDN'T BE NECESSARY TO DIAL THE CORRECT NUMBER!"

of the Harris-Fulbright Bill be satisfied with prices based on a recognition of business risks. Nothing short of complete exemption from regulation, with full authority to fix their own prices, will ever suit them.

It is to be hoped that, in spite of the unyielding attitude of some of the large producers, a majority can be found in both houses of Congress to vote for a sensible gas bill which will contain the protection for consumers which President Eisenhower considers essential.

**T**HE newspaper feels sure that unless a new gas bill is passed, gas pro-

ducers, and possibly the FPC itself, "will do all in their power to keep present price regulatory laws from working satisfactorily."

**T**RADE journals of the oil and gas industry, it says, are already hopefully discussing the possibility that state governments may step in to restrict the amount of natural gas available for interstate commerce. In this view, the gas industry would point to such an event, if it occurred, to support its claim that federal interference with prices is drying up the gas supply, as supporters of the Harris-Fulbright Bill had said it would.

## PUBLIC UTILITIES FORTNIGHTLY

The *Post* notes that only one of the five members of the Federal Power Commission believes it is practical to regulate gas producers under present law. If the commission should choose to take the position that it is confronted with an impossible

job in trying to regulate thousands of gas producers, large and small, the *Post* says, "it could make such a mess of present regulatory procedure that arguments in favor of no regulation would seem to have new validity."

### Mexicans Hear Criticism of U. S. Power Policy

MEXICANS have been warned to avoid mistakes made in the United States in the development of power policy—mistakes which have put a damper on investor-owned electric companies in both power generation and distribution.

B. L. England, president of Atlantic City Electric Company, in a recent address delivered in Mexico City as guest of the Mexican Light & Power Company, singled out in particular the government-developed "preference clause." This clause in federal laws gives preference in the sale of power from federal projects to public bodies and co-operatives.

England also scored the autonomous power policy of the Tennessee Valley Authority, which started out producing power as a by-product of dams built to control the waters of the Tennessee river, and now produces two-thirds of its electricity from its 15 coal-burning steam plants.

Before his Mexican audience, he offered seven suggested changes in federal power policy to permit investor-owned electric companies to better serve the public. Said England:

There have been many obstacles thrown in the path of the wonderful record achieved by the American electric light and power industry. Many of them were not of our own making, but some we now could classify as mistakes in judgment.

Insignificant and unimportant when it happened, one of the most devastating deterrents to progress of American

private water-power development today is what we call "the preference clause."

It was first enacted in 1906 when it was made part of our Federal Reclamation Act and in substance instructs any federal agency marketing federal electric power to give preference in the sale to public bodies and co-operatives. By so doing there is automatic discrimination against customers of the tax-paying, investor-owned utilities. Its first use was confined to surplus power developed in connection with irrigation of lands and was limited to a ten-year period. This first act also confined the marketing of power for municipal purposes.

Since then the same philosophy has been injected into nine other federal acts, dealing with water power.

HE said the "most infamous" form of the law was in the TVA Act, which empowers the TVA board to give preference to states, counties, municipalities, and co-operative organizations of citizens or farmers not organized or doing business for profit.

"This act," England declared, "marked a revolution in the attitude of the federal government toward the public utility industry."

England suggested a restating of federal power policy to include the following:

(1) No federal agency should assume any financial responsibility in a

## WHAT OTHERS THINK

project, the primary purpose of which is generation of electric power.

(2) Congress should approve the expenditure of public funds for only such hydro power projects as are economically sound.

(3) Local public bodies and investor-owned electric companies should be allowed the first opportunity to supply power in their own areas.

(4) Local public bodies and electric companies not able to construct electric facilities at federal dams should be permitted to lease and operate federal facilities.

(5) Local bodies and investor-owned electric companies should be permitted to provide and operate transmission facilities to take power from a federal dam.

(6) When federal agencies have power for sale, it should be sold, at wholesale, at uniform rates, and on equal terms to local bodies and investor-owned electric companies.

(7) Rates charged for federal power should be sufficient to cover expenses, maintenance, interest, and amortization of the federal project.

## Roanoke Rapids Dam Dedication

**D**EDICATION of the Virginia Electric & Power Company's new \$32,000,000 Roanoke Rapids dam on the Roanoke river in North Carolina carried the privately operated power industry in the Virginia area to new heights of achievement, according to the *Richmond Times-Dispatch*. Not only so, but the United States Supreme Court's 6-3 decision in 1953 to allow the company, instead of the federal government, to build this great dam, was one of the most significant victories of recent years in the field of private enterprise, it said.

The newspaper called it a victory, too, for the late Jack G. Holtzclaw, president of Vepco, who had worked tirelessly for many years to bring this about. The *Times-Dispatch* editorialist found it fitting, therefore, that a plaque in memory of Mr. Holtzclaw was unveiled at the exercises. The plaque says that the dam and power station were made possible through his "persistent effort and discerning leadership." The editorial continued:

Permission for Vepco to construct the dam and power station on the

Roanoke, 40 miles below the Kerr (or Buggs Island) dam, was only obtained after a bitter struggle with Oscar Chapman, then Secretary of the Interior, and a determined advocate of government power. Chapman wanted the taxpayers to finance construction not only of the Roanoke Rapids dam, but of eight other dams on the Roanoke and Dan rivers. These, added to the already-built Kerr and Philpott dams, would have made a total of 11 dams joined together in a federal power system.

The Federal Power Commission and the United States circuit court of appeals both ruled unanimously in favor of the company and against the government in the Roanoke Rapids matter, but Secretary Chapman delayed the whole thing for two more years with an appeal to the Supreme Court. When he lost there, he finally had to give up.

Chief Federal Power Commission Examiner Frank Hampton had said that the dam was needed as quickly as possible "in the interest of the country's economy and safety."



## TVA and Its Overzealous Friends

**A**VOWED friends of TVA have succeeded in building a wall of suspicion about it, General Herbert D. Vogel, board chairman of the agency, has declared in an article appearing in a recent issue of *The Military Engineer*.

Saying TVA stands up well as a basis for a sound engineering of broad concept and scope, General Vogel asserted that TVA is "logical, comprehensive, and realistic." He added that there is no easy answer to explain why so many people have felt called upon to attack or defend it with evangelical fervor. A partial explanation, he believed, may be found in the philosophical interpretations that became attached to the actions of TVA as the years progressed. General Vogel stated:

Both within and without the organization were people who failed to see its technical purposes as ends in themselves. Additional aims began to be attributed, and these, taken together, gave a sociological significance to the whole enterprise.

This was seized upon by others as a means of advancing a type of political doctrine. Soon TVA became a stalking-horse for those who sought to create an issue by claiming to champion it against both real and imaginary attacks.

... As the controversy grew, TVA found itself in the unwelcome position of being too greatly loved and too greatly feared.

Its friends had succeeded in building a wall of suspicion about it, and in the face of such a barrier true facts were difficult to present or ascertain.

General Vogel pointed out that TVA has often been attacked for things other

than its rôle as a producer of power. He commented that TVA has also received criticism from time to time on its activities in the fields of flood control, navigation improvement, fertilizer research, and resource development in general.

He added in this respect:

Many of the criticisms have been provoked by well-intended but sometimes overzealous supporters of TVA. Unfortunately, also, the somewhat fervent of devotion to TVA have served often to create an impression that TVA has acted in the self-appointed rôle of regional uplifter on other people's money.

TVA has responsibilities defined by law, and these are designed to make it always attentive to the national interest. What it does may benefit the valley, but by developing the valley there is also created a stronger link in the national chain.

The TVA chairman added:

There is no doubt of its ability to finance its own way into the future as may be necessary to meet the power needs of the region for which it is responsible.

But it does not seek new territory, and there exists no desire to encroach upon the domains and rights of others.

**G**ENERAL Vogel stated his belief that projects must be economically justified and undertaken in the national interest with a view of gaining the maximum co-operation from all other echelons of government. So prosecuted, he said, they will result in economic advantages to both the region and the nation.

# The March of Events



## AEC Contracts to Sell Power

**T**HE Atomic Energy Commission early this month announced it had signed contracts with two public power groups to buy electricity from the AEC's experimental atomic power reactor at West Milton, New York.

The city of Holyoke, Massachusetts, and the village of Ilion, New York, will each buy half the excess electrical output of the commission's experimental submarine reactor. The two utilities have until May 1st to arrange for transmission of

the power from West Milton to their own systems. The firms will buy the power at three mills a kilowatt-hour. However, the commission said it could not guarantee when or how much of the power would be available.

The power had been going to Niagara Mohawk Power Corporation. The AEC in January disclosed that the total amount of power sold commercially since January, 1955, was 12,000 kilowatt-hours or, at the rate of three mills a kilowatt-hour, \$36 worth.

## California

### Power Revenue Bonds Authorized

**A**UTHORIZATION for the issuance of \$20,000,000 in revenue bonds to finance initial phases of its Upper American river power development was granted last month by Sacramento Municipal Utility District directors.

Board President Royal Miller pointed

out this issue will be part of the \$85,000,000 in revenue bonds approved at a special election last December. He explained the purpose of the authorization act was to permit advance financial arrangements and avoid delay when SMUD is ready to proceed with construction. The bonds will not be sold until the district obtains the required federal power license and water rights from the state engineer.

## Nebraska

### City Voted Gas Service Control

**V**OTERS early this month granted the city of Stromsburg authority to assume control of the local gas service from

the Central Electric & Gas Company of Lincoln, by a vote of 379 to 247.

The election was held under a Nebraska law which provides that a city may take control of a utility through condemnation

## PUBLIC UTILITIES FORTNIGHTLY

proceedings and purchase by the city at the appraised value within ninety days after its appraisal.

Eldon Anderson, local manager of the gas company, called the vote "the outcome

of selfish interests." A similar proposal four years ago, he said, was defeated by a 2-to-1 vote. The Central Electric & Gas Company has operated in Stromsburg since 1930.

## New Jersey

### Utility Tax Floor Set

**A** BILL placing a 5 per cent floor on the state public utility gross receipts tax was given final legislative passage by the state senate on April 9th. The vote was 13 to 0.

The bill follows a measure enacted last year setting a maximum of  $7\frac{1}{2}$  per cent on the tax. Governor Meyner signed that bill only on the condition that the state legislature enact a minimum for the tax.

## New York

### Governor Vetoes Electric Submetering Return Act

**A** NEW YORK legislative bill that would have restored the practice of submetering electricity by landlords of business and commercial buildings was vetoed early this month by Governor Harriman. Under the submetering practice, landlords resell electricity to their tenants at rates higher than they pay utility companies for it.

It has been prohibited in nonresidential buildings in New York state since 1951.

Calling the history of submetering in the state "offensive," the governor quoted the state public service commission as saying the bill "would turn back the clock in a long battle against various abuses."

The governor based his veto largely on the fact that the bill was controversial and had been pushed through the state legislature on closing day without any real consideration of its merits or defects.

### Gas Rates Reduced

**A** TARIFF amendment filed by the New York & Richmond Gas Company, designed to reduce rates to customers served under residential and all-purpose

classifications, has been accepted by the state public service commission. The total reduction would amount to \$108,000 annually. Last July the company reduced rates by about \$93,000. The new rates became effective April 15th.

The commission has also accepted a tariff filed by New York State Electric & Gas Company designed to establish new lower rates for gas customers in its Lockport district, effective April 14th.

The new tariff provides for reductions aggregating \$222,000 annually to customers served under its all-purpose and residential classifications. This will be offset by increases of \$4,500 annually in some bills for low use by customers who are now receiving service under space-heating and water-heating and refrigeration classifications which are to be eliminated.

### Commission Approves Transportation Plan

**T**HE state public service commission on April 6th approved, in principle, the second amended plan for the reorganization of the Third Avenue Transit Corporation and its affiliates which was submitted to it by the U. S. district court for

## THE MARCH OF EVENTS

the southern district of New York. The approval was conditioned, however, on a requirement that opening book entries of the reorganized corporations conform with commission requirements and that the plan "be not effective unless and until the consolidated book assets of the reorganized companies exceed the consolidated book liabilities."

The plan calls for the continuance of

the corporate structures of Surface Transportation Corporation and Third Avenue Transit Corporation. The latter will change its name, however, to Biboro Corporation. Surface will continue as an operating company but all of its stock will be owned by Biboro. Westchester Street Transportation Company is to be merged into Westchester Electric Railroad Company.

## Ohio

### Electric Submetering Issue Raised

**Q**UESTION of whether a building operator can buy electricity at a cheap commercial rate and then resell it at a profit to his tenants was taken under consideration recently by the state public utilities commission.

Pointing out that the commission has no present policy on reselling current, an attorney-examiner said the policy question might have to be settled by the state legislature. Although resale for profit is already forbidden by the Columbus & Southern Ohio Electric Company, the rule has not been enforced.

The attorney-examiner for the commission submitted a recommendation under which the way would be clear for the electric company to force building op-

erators to stop reselling power. A case involving Westgate Trailer Park in Columbus prompted him to recommend that the company suspend its ban on submetering since it was not being enforced on all customers. He advocated that the suspension remain in effect until the company could make uniform application of the provision. This would mean an end to submetering by all customers.

The commercial manager for the power firm said the company wants to stop all submetering and would like to buy electric lines and meters from buildings which have installations for submetering. Noting that in the trailer park's case, the company offered to pay \$2,500 for equipment that cost \$20,000 to install, he explained this was because the installed equipment was more expensive than the company would have put in itself.

## Oregon

### Support for Taxation

**S**TRONG sentiment for taxing municipal electric utilities—now taxed by cities in which they operate—and increasing tax revenue from rural electric co-operatives was expressed by members of a subcommittee of the legislative tax interim committee last month.

State Representative Wayne R. Giesy, Monroe, contended that the tax-free na-

ture of municipal utilities gives many of them undue advantage in distribution of the basic school fund. He cited the Eugene Water & Electric Board, which, he said, has \$17,000,000 worth of "tax-exempt" property in its electric department. State Representative Ed Cone, Eugene, would go part way with Giesy but he scouted taxing the utility's property inside the city limits.

## PUBLIC UTILITIES FORTNIGHTLY

The Monroe representative proposed a taxation formula that would begin with the ad valorem tax paid by private utilities and public utility districts, determine what rate that figure would amount to as a gross revenue tax, and apply that tax to REA and municipal utilities.

State Representative Charles A. Tom, Rufus, subcommittee chairman, advocated giving REA's the option of paying their present 2 per cent gross revenue tax or paying an ad valorem tax, with the idea

that public opinion sooner or later would bring them to the latter tax.

He suggested that property of a municipal utility outside city limits be brought under the ad valorem tax. For property inside city limits, he proposed that it be appraised by the state tax commission, and that this amount then be treated as a school district asset in computing basic school fund money it is to receive. That would mean less basic school money for the district.

## Tennessee

### Plans to Buy TVA Properties

**T**HE Memphis Light, Gas & Water Division plans to buy the Tennessee Valley Authority properties in Shelby county, Division President T. H. Allen said recently.

Allen said the purchase price would be

about \$5,000,000 and would be made about the time Memphis puts its own generating plant into operation. Target date is June, 1958.

The properties include two substations, transmission towers, lines and right of way, and a generating station.

## Texas

### No Interest Due on Gas Tax Refund

**T**HE third court of civil appeals at Austin ruled recently that the state is not required to pay interest on taxes paid under the now-defunct natural gas-gathering tax. The court denied \$249,516.74 in interest awarded Tennessee Gas Transmission Company by a lower court, but up-

held the company's right to a \$1,140,906 tax refund.

The 1951 gathering tax act was declared unconstitutional by the U. S. Supreme Court in 1953. Tennessee Gas was one of several pipeline companies which paid the tax without protest. Companies which paid under protest were refunded without litigation when the tax was voided.

## Washington

### PUD Plans Project

**T**HE Skamania County Public Utility District plans to start construction late this year on a \$4,000,000 hydroelectric project on the Little White Salmon river to provide 20,000 kilowatts of firm power.

The project will include an earth-filled dam 2,000 feet long and 125 feet high,

backing up a lake three miles long and one mile wide which will have 60,000 acre-feet of storage. It would have a 765-foot fall from forebay to turbines.

Two 10,000-kilowatt generators will be used to provide the firm power on a continuous flow basis by storing winter waters behind the dam, which is to be three miles above Willard, Washington.





# Progress of Regulation

## *Trends and Topics*

### Monopoly in the Public Utility Field

THE congressional investigation of antitrust aspects of the relationship between federal regulatory commissions and the industries they regulate calls for a clear view of the monopolistic position of public utilities. Territorial monopoly, to the extent permitted under commission regulation and subject to commission restraints, has been recognized as the best form of public utility operation. Persons unfamiliar with the history of regulation may, however, ask why this monopoly is permitted.

The short answer is that in ordinary business undertakings, like merchandising, the force of fair competition protects customers against unreasonable prices and inferior goods or service. On the other hand, commissions restrain public utilities from charging too much, and they compel utilities to render adequate service. This is a substitute for competition, and competition would ordinarily not be in the public interest. There may be some exceptions, as in the case of railroads, which, according to some opinions, should be allowed more freedom to compete with the many other forms of transportation.

#### *Destructive Nature of Competition*

When applied to public utilities, competition operates abnormally and proves self-destructive. Given a certain plant facility, the expenditures for operation are more or less constant regardless of increases in the rate of output. Where there is unused capacity, producers in a desire to secure full utilization try to increase the volume of business, which, although it proportionately increases variable operating costs, does not affect constant expenditures.

Where two competing producers are operating in the same market, the combined capacity is in excess of existing requirements. When such producers endeavor to increase their output, rate wars between them and discrimination among different consumers of the same plant are inevitable. Moreover, the supply of the product is wasteful of producing capacity. One producer may be fully capable of supplying the total requirements. Under competition, both

## PUBLIC UTILITIES FORTNIGHTLY

producers are trying to charge prices equal to their operating costs. Consumers, in the aggregate, are paying more than the necessary cost of production.

### *Natural Monopolies*

Today, public utilities are regarded as natural monopolies since by nature they are forced to grow with expanding markets, to bring competition among themselves under control, and to consolidate until they have completely monopolized their respective markets.

Freedom from competition is considered advantageous both to the utilities and to their customers because of the high capital costs and fixed charges to which utilities are subject. One set of tracks or poles or underground structures can service a community better than duplicate sets used by competing companies, since the single set requires less investment and lower operating costs.

Of course, no public utility is ever completely monopolistic, except in the sense that each enjoys the privilege of serving a particular area in its chosen field. Railroads compete with private automobiles, buses, taxis, and air carriers. Electric companies have to contend with private power plants and gas companies, which, in turn, must compete with coal, wood, and oil.

### *Antitrust Laws*

Even though regulated public utilities are protected from competition, they are not *per se* entirely exempt from antitrust laws. They cannot enter into conspiracies to fix rates, says the Supreme Court (59 PUR NS 132). This principle was applied by a federal court in litigation between Pennsylvania Water & Power Company and Consolidated Gas, Electric Light & Power Company of Baltimore (86 PUR NS 33); but a federal law providing for comprehensive and detailed regulation leaves only a limited field for application of antitrust considerations (94 PUR NS 161, 175).

---

## *Review of Current Cases*

### Commission Disallows Some Expense Claims and Examines Service Cost to Classes of Customers

THE Arkansas commission denied the Arkansas Power & Light Company's application for authority to increase rates, after rejecting certain claims for operating expenses. It believed that the proposed rates were designed to place additional burdens upon those classes of customers which, in the commission's opinion, were presently paying their just proportion of required revenue.

#### *Cost of Service to Classes of Customers*

The commission said that a cost-of-service study was absolutely necessary because approximately 45 per cent of the company's output was delivered to one industrial customer, for which the company proposed no rate increase. The commission said that it was inconceivable that operating costs and taxes could have in-

## PROGRESS OF REGULATION

creased only with respect to general service customers. Furthermore, it was pointed out, the company sells electric energy to 14 co-operatives at wholesale for resale at contract rates which, according to the company's own admission, did not provide a return comparable to the over-all return. Revenue from business done with the co-operatives and the large industrial customer did not yield a 6 per cent return.

The commission held that if the company has outstanding contracts under which it fails to recoup the costs involved, they must not become a burden to other customers. In such instances the company must give effect to the rates in an amount which will produce such customers' fair share of costs and return, and any deficit represented by the difference between what the customer pays and what it should pay should be accounted for and borne by the stockholders.

### *Administrative and General Expense*

The commission believed that the company's administrative and general expense contained many items of a questionable nature, such as donations, contributions, dues, and investments. The latter item was a capital investment rather than an expense item. The company compared these expenses with those of twelve other electric companies, two of which were affiliates. Some operated in Texas and Mississippi, where regulation is largely a city or local matter. The commission said that it did not imply that there was laxity of regulation in those states, but companies which must seek rate authority in numerous cities rather than from one central regulatory body manifestly would have greater administrative and general expense.

After comparing these expenses with a large number of other electric companies, rather than a selected few, the

commission concluded that they should be substantially reduced.

### *Depreciation Expense*

The company included the cost of clearing rights of way in its total net additions for the purpose of calculating depreciation expense. The Uniform System of Accounts as prescribed by the commission, however, provides that the first cost of clearing rights of way for electric lines shall be capitalized. After a line is placed into service, subsequent clearings are to be expensed. The Uniform System of Accounts classifies this first cost of clearing of rights of way as a part of the land and land rights. Consequently, the commission concluded that land and land rights or clearing of rights of way should not be treated as depreciable property.

### *Excess Generating Capacity*

The company had generating capability far in excess of that required to meet peak demands during the test period. The commission believed, however, that excess capability would become revenue producing in the near future. It pointed out that, in considering what would be a fair return, it bears in mind not only the earnings during the test period, but any known factor that will increase or decrease earnings in the immediate future.

The commission said that it was not its intention to criticize the company because of this excess capability, but, instead, it desired to commend it for its foresightedness in designing the facilities so as to produce electric energy at the lowest possible cost.

However, the commission believed it would be grossly unfair and inequitable to the customers to fix a tariff to produce a fair return, without giving effect to the earnings which would inevitably result as

## PUBLIC UTILITIES FORTNIGHTLY

this excess capability is taken by consumers.

### *Interest on Customer Deposits*

Interest on customer deposits was disallowed as part of the company's revenue requirements. Although in the past the company has been permitted to collect this amount from ratepayers, the commission noted that under the new federal income tax laws the company is allowed to depreciate over a 5-year period the cost of new construction and expansion deemed necessary to national defense. The company had been given depreciation certificates by the Federal Defense Production Administration.

This privilege gave the company "tremendous savings in income taxes," and it was given without requiring the company to pass on to ratepayers any of the benefits and advantages gained. Consequently, the company had the use of a portion of the funds saved, by reason of this new tax procedure.

Interest-free money accumulated by reason of this "windfall" was deemed to be far greater than the amount the company was required to pay as interest on customer deposits. The commission concluded that it would be fair to defer the right of the company to collect from ratepayers interest on customer deposits so long as the benefits from the reserve for deferred income tax exceed or equal the amount of interest on those deposits. It said that if the company had to pay the average cost of debt money for the interest-free money held in this account, it would far exceed the amount required to be paid as interest on the deposits.

### *Return Allowance*

After deleting from revenue requirements the interest on customer deposits,

and after giving effect to the revenues that the company should be receiving from contract customers, and without giving effect to a part of the excess capability of the plant in service, the commission found that the company was earning a return of 5.86 per cent. It said that it is impossible to fix a tariff that will at all times produce a given rate of return. As revenue lags occur by reason of fast expansion, the return drops, but as expanded plant goes into service and the revenue lag is taken out by the customer using the new expansion, the return immediately begins to build up again.

In view of the various factors causing a fluctuation in the rate of return, the commission believed that there should be a margin of flexibility, based on the earnings record of the company. In this case it found that a return of from 5½ per cent to 6¼ per cent would be adequate and would be fair and reasonable to the company, the consumers, and investors in the company's securities. In conclusion the commission said:

This commission is acutely aware that the rate of return a company is permitted to earn is a factor in establishing the regulatory climate in this state, which is considered along with the other orders of the commission and the attitude of the commission toward the rights of the investors who invest money in utility securities in this state. This commission considers every dollar invested in utility securities in this state, whether the investor lives in Arkansas or out of Arkansas, to be a sacred trust, and the commission will do all that is possible within its authority to protect the integrity of the utility investments and to see that each utility operating in this state has an opportunity to earn a fair and reasonable return. The commission has been criti-

## PROGRESS OF REGULATION

cized in the past for being too liberal in its attitude toward money spent by utilities for operating expenses, in establishing rate base, and the amounts allowed for rates of return. The commission believes that this liberal attitude has been conducive to the utilities securing money at reasonable rates of interest

and ready investors in the money markets. Investors in utility securities are hereby assured that the regulatory climate will continue to be favorable in the state of Arkansas.

*Re Arkansas Power & Light Co. Docket Nos. U-1073, U-1027, March 7, 1956.*



### Question of Airline's Right to Comparative Hearing Brings Judicial Intervention

**O**BJECTING to an order of the Civil Aeronautics Board denying consolidation of its application with one filed by Eastern Air Lines, Delta Air Lines obtained an order from a federal district court staying further proceedings by the board pending review.

Delta claimed that its application for authority to furnish service between Cincinnati and Memphis on its north-south route was mutually exclusive to the application of Eastern relating to approximately the same north-south segment, since the authority sought would support only one service.

Delta therefore asserted the right to a comparative hearing in which its interests in relation to those of Eastern could be determined.

The board, however, thought the applications were not mutually exclusive and so denied consolidation. Apparently the board believed that it could hear the Eastern application on its merits without hear-

ing Delta and without deciding finally whether Delta had a right to a hearing as a mutually exclusive applicant. Under an established rule (61 PUR NS 466), where the applications of two qualified applicants for a license are as a matter of economic fact mutually exclusive, each applicant is entitled to a comparative hearing and consideration with his adversary.

While the board's order refusing to consolidate the applications would not normally be reviewable since it would not normally be a final disposition of rights, the court observed that in this case the board's motion to dismiss the appeal raised the question whether the denial of a comparative hearing also denied any rights of Delta. But the court declined to decide this question without full briefs and argument. It therefore granted a stay of the board's proceedings in order to protect Delta's right to review if there was such a right. *Delta Air Lines, Inc. v. Civil Aeronautics Board*, 228 F2d 17.



### Rates Need Not Be Sufficient to Maintain Stock Issue Price Fixed by Commission

**I**N a suit to annul a rate order of the Massachusetts commission, an electric company argued before the state supreme court that its rates under the order were inadequate to maintain the price for which

its stock was earlier required by the commission to be sold. The suit was dismissed.

Several years previous to the order in question the company had requested approval of a stock issue. The commission



## PUBLIC UTILITIES FORTNIGHTLY

authorized it but required a substantially higher price per share than that determined by the directors. Other issues were subsequently approved at the same figure.

The statute under which the commission fixed the higher price provided that the price fixed by the directors should be established, unless the commission considered it so low as to be inconsistent with the public interest.

The company contended that an order fixing rates insufficient to permit the sale price of the stock to be maintained was "patently unfair and outrageous." It was contended that the commission, having required the higher stock price, was bound to allow rates sufficient, under reasonably economical management, to maintain that price in the market.

### *No Guaranty of Stock Sale Price*

The Massachusetts supreme court adopted a different view. It asserted that the duty of the commission under the statute relating to stock prices was distinct and different from its duty to fix rates. In fixing a price for stock, the value, as re-

flected in the attitude of potential investors, must be considered.

The rate question, on the other hand, depends upon what is deemed to be a fair rate of return upon property used and useful in the public service, giving proper attention to the ability of the company to attract additional capital as needed. But the commission cannot disable itself from performing one of these duties, said the court, by the manner in which it performs the other. The commission is not bound to fix rates that will forever, or for any period of time, maintain stock at the price for which the commission required it to be sold.

It was observed that the interval of time which elapses between the fixing of the price of stock and a decision establishing rates might materially alter the components entering into each of the calculations. At all events, the court indicated, the purchaser of stock knows that he has no guaranty that future rates will always support the price of the stock. *Cambridge Electric Light Co. v. Massachusetts Dept. of Pub. Utilities*, 131 NE2d 922.



## Average Investment Rate Base Adopted in Lieu of Year-end Figures

THE New Hampshire commission granted a \$353,000 rate increase to the New England Telephone & Telegraph Company to enable it to earn a 6 per cent return. In a previous case (97 PUR NS 410) the commission had found that a return of between 5½ per cent and 6 per cent would be fair and reasonable for the company. That decision was upheld by the New Hampshire supreme court (99 PUR NS 111).

In the instant case the company waived any reconsideration of the points of difference between it and earlier commission de-

cisions, preferring to seek prompt rate relief without the necessity of lengthy and expensive investigations and hearings. It presented its case on the basis both of an average net plant investment for the year 1955 and on net plant investment as of December 31, 1955. The state's deputy attorney general offered no objection to the company's petition, but insisted that earnings be figured on the company's average net investment for 1955. The commission adopted this basis.

The commission concluded that the company failed to earn a return consistent

## PROGRESS OF REGULATION

with the earlier finding and that it was entitled to earn a 6 per cent return. The commission pointed out, however, that this rate was applied to the average net investment, which was less than the company's actual investment as of the end of the year. Consequently the return would be less than 6 per cent on the company's actual present plant.

### *Dissenting Opinion*

Commissioner Thornton dissented on the grounds that the return allowed should be 5.75 per cent. He pointed out that since the last case the company had increased its annual dividends from \$6 to \$8 per share and had granted general wage increases in 1952, 1953, 1954, and 1955.

According to Commissioner Thornton,

the increased compensation of capital and labor is justified to a point, if accompanying benefits accrue to the rate-paying public.

He did not believe it fair, however, to expect the ratepayers to continually shoulder the entire burden of improving the stockholders' earnings. He said that prudent management and responsible labor should have some area in which they must operate to improve earnings, rather than to have the public assume the entire cost. Accordingly, he would fix the return at 5.75 per cent, subject to the ability of management and labor to raise it to 6 per cent by proper economies, increasing productivity, and technical improvements. *Re New England Teleph. & Teleg. Co. D-R 3492, February 16, 1956.*



## Board's Refusal to Consolidate Airlines' Proceedings Ruled Not Reviewable

A UNITED STATES court of appeals dismissed a proceeding by United Air Lines for review of orders of the Civil Aeronautics Board refusing to consolidate for hearing the airline's certificate application with those of other companies then before the board.

United applied to the board for authority to serve several cities on a transcontinental route that included the city of Denver. The airline was already authorized to serve Denver. Other airlines had requested authority to serve that city also, in their transcontinental operations. Since the other applications, if granted, would impose a substantial competitive burden upon United, that company sought to have its application consolidated with the others in order to protect its interests.

United contended that the proceeding was not a Denver service case, but involved a competitive realignment of the

transcontinental route systems of United and other airlines. The board was of the opinion, however, that United's application related to issues beyond the scope of the proceeding on the other applications.

The court recognized the adverse competitive effect which the granting of the other applications would have upon United but declared that it could not anticipate the board's action. To do so would be to invade the board's function.

The orders complained of made no effectual disposition of rights and therefore were not reviewable by a court. Review would have to await the board's final action in the case. Administrative orders, said the court, are not reviewable unless they "impose an obligation, deny a right, or fix some legal relationship as a consummation of the administrative process." *United Air Lines, Inc. v. Civil Aeronautics Board, 228 F2d 13.*

## Electric Company Duty Bound to Replace Cable after Assurance of Adequate Compensation

THE city of New York complained to the New York commission that an electric company had failed to replace a submarine cable serving a certain island. The cable involved was a stand-by facility by which electricity would be supplied to the island in the event of faults in other sources of supply. Its repair or replacement had been found necessary, in a previous proceeding, to insure provision of safe and adequate service.

The city had construed the previous order as relieving it from any obligation to bear the cost of the service either by way of reimbursement or by way of rate adjustment. This construction, held the commission, was clearly in error.

### *Tariff Provisions*

The company claimed that it had no tariff provision relating to extensions except one relating to overhead wires which was not applicable to the service involved in this controversy. Nor was there any order of the commission regarding the same.

The company argued that its tariff provisions were sufficiently clear to indicate that extensions on private property must be paid for by the person seeking service, or that no extension except for overhead wires would be made in any public street beyond the statutory distance.

Such a contention, said the commission, might be controlling if this were an application by a new customer. Here, however, the predecessor of the company had instituted the service. Having undertaken service in the past, the commission thought that the company had no right to abandon it and that it could not legally abandon the service by a change in tariff provisions, irrespective of how desirable such

provisions might be. This, of course, did not mean that the company was not entitled to adequate compensation or that changing conditions required the company to furnish the same type of service under the same conditions of maintenance and replacement that it had undertaken originally.

### *Burden of Cost*

The company urged that under present practice city, state, and federal governments construct submarine cables for delivery from the mainland at their own expense, and that the construction in this case, as desired by the city, would either be discriminatory or create a dangerous precedent, or both. Having undertaken the service, the commission answered, there is a responsibility to continue it. This responsibility, however, did not mean that the service should be rendered without adequate compensation to the detriment of customers in general or any class of customers similarly situated.

Since there was no specific provision of law or a provision in the company's filed tariff, or in its contract with the city, requiring the company to install the cable at its own expense, it followed that the company should not be required to replace the cable until it was assured of adequate compensation.

Adequate compensation could be insured in one of three ways: (1) By agreement with the city as part of the contract. (2) By the payment by the city of the cost of installation. Such a contribution, for accounting purposes, would be treated as a contribution in aid of construction. (3) By the filing of an appropriate tariff provision providing for a surcharge on the cost of construction.

The commission pointed out that the

## PROGRESS OF REGULATION

company was at liberty at any time to file such provision and upon a filing the city would be entitled to be heard on its reasonableness. By the same token, if the city desired the company to file such provision

to carry out the intent of the opinion, the commission on proper application would require the company to do so. *City of New York v. Consolidated Edison Co. of New York, Inc.* Case 17232, February 21, 1956.



### Retained Earnings No Criterion for Determining Reasonableness of Rates

A CITY protesting against increased water rates authorized by the Indiana commission advanced to the state supreme court the unorthodox contention that earnings retained by the utility over and above what it paid out in dividends were a trust fund for the benefit of consumers. The argument was made in the face of the fact that the city's own financial expert had stated that the dividend rate of the company was too low. Nevertheless, the city contended that the company had excessive earnings which it wrongfully used for capital expansion and which should have been used to pay dividends on an increased capital stock issue.

This contention, said the court, is nothing more than declaring that the dividend rate upon outstanding capital stock is a criterion by which one may determine whether or not the income, returns, and earnings of the company are exorbitant and unreasonable. To say that a utility's rates are unreasonable because it pays large dividends or has a high per share earning rate, said the court, is a popular fallacy which seems to appeal to the public fancy. Such a statement is only evidence of superficial thinking.

The capitalization and the stock outstanding may not have any fair relationship to the actual investment in property used by the utility, its reproduction cost, or its fair value. If capital stock could be left in the same relationship to the fair value of the assets at all times by issuing

new stock, or by the reduction of outstanding stock, dividends or earnings on the outstanding stock might reflect the reasonableness or unreasonableness of the return.

However, such a supposition is unrealistic in view of the continued changing values in costs and everyday operations. Every day and every minute there is a change in values. It would be impossible to keep outstanding stock in any exact relationship to assets. Some companies from past practices might have an excessive issue of stock. Other companies, by conservative and efficient practices, might have an underissue of stock outstanding and have surplus accumulated by reason of unusually low dividends, which surplus might not be represented by any outstanding stock.

Stockholders might see fit to leave their earnings in the corporation instead of drawing them out as dividends, and thus build up the financial strength and prestige of the company. As a result, the utility would be able to borrow at cheaper rates. This would ultimately benefit the ratepayer as well as the company.

The latter situation prevailed here, according to the testimony of all witnesses, including the financial expert testifying on behalf of the city. The record showed that common stock had earned \$1.87 per share and paid out as dividends only 80 cents and 50 cents per share on class A and B stock, respectively. Earnings left in

## PUBLIC UTILITIES FORTNIGHTLY

a business were said to be the least expensive method of acquiring new capital. Such retained earnings belong to the corporation and the shareholders, and they are entitled to receive a return on such increased investment.

The unsoundness of a contention that

large dividends or earnings are indicative of unreasonable rates, said the court, is self-evident. The city would probably be, and should be, the first to object to a rate base measured by outstanding stock. *Indiana Pub. Service Commission v. City of Indianapolis*, 131 NE2d 308.



### Pedestrian Grade Crossing Approved as Exception To Established Policy

THE city of Burlington obtained permission from the New Jersey commission to provide a pedestrian grade crossing over a Pennsylvania Railroad track located within the city. The commission indicated, however, that as a matter of policy it was opposed to the establishment of new grade crossings and would seek to eliminate those which subject public travel to undue hazard or impediment.

Because of the special circumstances shown in this case, the commission felt

that an exception to its usual policy was warranted. The track was a single main line, and the few trains moving over it were operated at a slow speed. Since the crossing would be used primarily by school children, the city agreed to provide police supervision at the crossing during rush hours. Finally, the commission found that the interest and safety of the public would not be adversely affected by the approval of the application. *Re City of Burlington*, Docket No. 8674, February 15, 1956.



### Transit Company Fails in Judicial Bid to Put Rail Facilities on New Bridge

A PENNSYLVANIA superior court affirmed a commission order approving highway crossings of street railway facilities as proposed by the state highway department in connection with the construction of a bridge across the Monongahela river in Pittsburgh. The railway company objected to the order, asserting that provision should have been made for the installation of rail facilities on the new bridge. Since the new bridge was intended to replace an old one on which the company then had its tracks, and since the latter was to be torn down, the company insisted that it was entitled to use the new bridge, or at least to have the approaches to it designed so as to permit the installation of rail facilities whenever the existing bridge

should be removed. On the assumption that the old bridge was to be torn down, the company contended that the commission should have enlarged its inquiry, beyond the limited question of the crossings, to include the new bridge as well as the approaches to it.

But it did not in fact appear from the evidence, the court observed, that the new bridge was to replace the old one, or that the latter was to be torn down. Nor would the railway operations be affected by the construction of the new bridge. Though the commission had found that there was no present public need for the construction of railway facilities on the new bridge, it was shown that the proposed design would permit the installation of such



## PROGRESS OF REGULATION

facilities if later required. In these circumstances the court said the commission order was neither arbitrary nor unreasona-

ble and must be upheld. *Pittsburgh R. Co. v. Pennsylvania Pub. Utility Commission*, 119 A2d 804.



### Common Carrier Certificate Denied to Private Carrier

THE Colorado commission refused to grant a common carrier certificate to an applicant providing private carrier service for the transportation of newspaper and film.

The applicant testified that his chief concern in securing common carrier authority was to be able to protest the granting of common carrier and private carrier applications to persons who might wish to render service in the areas he was now serving under his private carrier permit. Witnesses for the applicant testified that present service was adequate and dependable, but that better service would result if the common carrier certificate was granted.

The commission felt that the service contemplated was more in the nature of private carrier service. If the granting of authority was without opposition, said the commission, it might be justified in granting it. But where protesting existing carriers claimed that the service offered might jeopardize their position, and the present private carrier service offered by the applicant was adequate, the commis-

sion would not grant the certificate.

It appeared to the commission that adequate common carrier authority had been granted already to take care of all reasonable needs for the shipping of newspapers and film. While the commission did not say that the service rendered by common carriers was without fault, it was of the opinion that if the service provided by existing carriers was not adequate, corrective measures could be taken.

The commission stated that it fully realized the problem of bus transportation companies which had appeared as protestants in the proceeding. They were rendering a vital and necessary service to the public. A part of that service was the transportation of express, of which newspapers and films were a substantial portion. The commission did not wish to make such companies' burden any heavier. The application, if it were to be granted, would encourage rate increases and curtail the express service of present common carriers. *Re Snider (News & Film Service) Application No. 14054, Decision No. 45345, February 14, 1956.*



### Transit Company Wins 15-cent Fare over City Protest

THE North Carolina commission granted a request by a transit company serving the city of Greensboro for a rate increase sufficient to cover operating expenses and provide a return of 2.9 per cent. The company had been operating at a loss for a number of years as a result of steadily declining patronage and mounting operating costs. The increase in fares

from 10 cents to 15 cents was requested in the face of an expected further decline in patronage of about 16 per cent.

The city of Greensboro protested the application apparently with a view to searching out any overcharges to the transit operations, considering that the applicant also provided electric service to the city. Because of this dual operation, it was

## PUBLIC UTILITIES FORTNIGHTLY

contended that the company was not entitled to an increase in transit fares without showing a need for additional revenue from its entire service. But this contention was unavailing. The commission noted that the two operations had no relationship to each other, neither being dependent on the other. Separate records and accounts were kept for each operation.

The city insisted that the commission had no jurisdiction to grant the rate increase, citing an act under which the city was chartered which, it was alleged, conferred power upon the city to fix rates for public transportation service. Actually, upon complaint that existing rates were unreasonable, the statute authorized the

city council to investigate the rates complained of and to seek an equitable arrangement with the utility. If no such arrangement could be obtained, the council was further authorized to fix maximum rates, though they would not become effective until approved by the commission after full hearing. The legislature also provided that this statute should not be regarded as diminishing the authority of the commission.

Pointing, therefore, to the plain language of the statute, the commission declared that no such authority could be drawn from its provisions as would oust the jurisdiction of the commission. *Re Duke Power Co. Docket No. B-209, Sub 2, February 23, 1956.*



### Inactive Use of Operating Rights Held No Bar to Transfer to Another

A COMMON carrier applied to the Utah commission for a certificate of convenience and necessity embodying certain operating rights of another carrier. The carrier had contracted with the other to purchase its certificate with respect to transportation of household goods. The commission pointed out that its rules preclude the transfer of operating rights, and required that the certificate of the retiring carrier be canceled and annulled and that a new one with like authority be issued to the carrier undertaking the performance of the service.

A new showing of public convenience and necessity, said the commission, is not required in such a proceeding since it had been shown in the original proceeding. Evidence of the active operation of the retiring carrier was indicative of public need for a continuation of the service.

The evidence in this case, however, disclosed that the retiring carrier had given

far more emphasis to other transportation service included within its authority than to the transportation of household goods. Existing common carriers had protested that the retiring carrier had not been a strong and active competitor in the household goods transportation field, whereas the applicant might become an active and vigorous competitor if the requested certificate were issued.

#### *Nonuse of Certificate*

The commission noted that the efforts of the retiring carrier in the household goods transportation field had indeed been minimal. In a proper case, the commission said, cancellation of the retiring carrier's certificate for nonuse would have been fully justified. The law never intended that a certificate of convenience and necessity could be held unused, in contemplation of sale at a profit at some future time. The commission recognized that the

## PROGRESS OF REGULATION

evidence presented a very close and onerous question. Should the application be denied by virtue of the retiring carrier's certificate not having been actively used, consistency would require that the commission immediately institute proceedings to cancel the certificate for nonuse.

The retiring carrier, however, was a much stronger carrier in the over-all aspect financially than the applicant, and if the substitution proposed in this case was not permitted and the certificate not canceled, the retiring carrier would continue in the field. He was financially able to increase the amount of equipment and personnel devoted to household goods transportation should the increase be warranted.

The Utah commission felt that it would be illogical to attempt to cancel the certificate for nonuse at the very time the business handled under the certificate was on the upgrade and undergoing an increase.

The commission pointed out that an increase in the number of carriers was not contemplated by the application. In fact, approval of the application would actually serve to decrease the number of household goods carriers. The applicant presently

had some authority for the transportation of such goods which, if merged with the authority held by the retiring carrier, would reduce by one the total number of carriers authorized to transport household goods.

### *Public Interest*

The commission was primarily concerned with the public interest. The very fact that the protestants seemed to fear the future competition of the applicant more than the competition of the retiring carrier indicated to the commission that the applicant would serve the transportation requirements of the public better than the retiring carrier had done.

The commission found that public convenience and necessity required a continuation of the services and that the applicant was ready, willing, and able to perform, and financially fit to do so. Consequently, the retiring carrier's certificate, in so far as it related to household goods, was canceled, and a new certificate embodying all the sought-after rights was issued to the applicant. *Re Provo Transfer Co. Case No. 3982-Sub 1, February 3, 1956.*



## Exclusive Operating Rights Not Guaranteed by Natural Gas Act

THE United States court of appeals has affirmed a Federal Power Commission order directing Tennessee Gas Transmission Corporation to sell gas to two local distributors serving the metropolitan New York area and the Hudson river valley. The appeal was taken by two pipeline companies which have been supplying gas to the distributors.

The existing suppliers claimed that the order would result in an economic loss to them, because their sales to the local com-

panies would be reduced. The court decided, however, that the commission had considered this problem, because in its order it had limited the amounts of gas to be supplied by Tennessee.

### *Public Interest*

In considering the public interest factor, the court found considerable evidence in the record that the private consumers would benefit. There was the possibility that the individual consumers might bene-

## PUBLIC UTILITIES FORTNIGHTLY

fit by cheaper rates as well as a more reliable supply system. Tennessee's line would provide protection against failure of gas supply due to a line break or other emergency affecting existing facilities.

### *Certificate Protection against Competition*

The existing pipeline companies also claimed that the order deprived them of rights which were granted by their certificates. In rejecting this argument, the court cited several cases holding, in effect, that the right to continue to serve an area exclusively is not granted to a certificate holder by the Natural Gas Act (68 PUR NS 76, 75 PUR NS 6, 8 PUR3d 8).

Another argument raised was that, as-

suming the commission had power to grant a certificate to a second supplier to serve an area being served, it had no power to require such service by order pursuant to § 7(a) of the Natural Gas Act. But, the court said, to uphold this contention would in effect force it to consider the various subsections of the act as being mutually exclusive. This it could not do. In fact it found them to be complementary.

The court concluded that there was no basis in the legislative history of the act for the creation of a third limitation on § 7(a); namely, where the area involved is already being served by a natural gas company. *Home Gas Co. v. Federal Power Commission*, No. 12,726, March 15, 1956.



## Fair Value Rate Base Prescribed and Prudent Investment Theory Rejected in Texas

THE supreme court of Texas has ruled that the present fair value of property, reasonable expenses, and a reasonable net rate of return must be considered in fixing natural gas rates. In so holding the court reversed and remanded a rate case for further action in the light of the standards established. The commission had found fair value to be largely equivalent to book cost.

In Texas the legislature has delegated the power to fix gas rates, in the first instance, to cities with the provision that a dissatisfied party may transfer this function from the city to the commission by appeal. The commission in fixing rates is governed by statute. The legislature has prescribed that rates shall be based upon a return upon a property rate base, and not upon the prudent investment theory. But, the court noted, it set very few limitations on the delegation of power to fix the value and percentage rate of return.

In discussing the question of fair value, the court held that the cases establish that the words "fair value" mean "present value." It pointed out, however, that it is neither desirable nor practical to use the same valuation formula for all types of property used by a gas company. For example, the difference between valuing a 2-year-old pick-up truck where there can be a ready sale on an easily available market and a 15-year-old gas main buried under a paved street is apparent. Replacement costs new less adjustment for age and condition may or may not be close to the sales value of a secondhand truck. Where a piece of property has a sale value apart from and unconnected with the utility rate being fixed, this would seem to be the best criteria, according to the court.

But, it said, the gas main may have no salvage or sale value at all. It may have value only in its use in the sale of gas. Its value for that purpose would depend en-

## PROGRESS OF REGULATION

tirely upon the rate. The court said that, for lack of any other criteria, it would bracket the problem of fixing a value for the gas main as a reasonable balance between original cost less depreciation and replacement cost new less an adjustment for present age and condition.

The court observed that Mr. Justice Hughes once pointed out that the original cost test deprives the equity ownership of any chance to fluctuate with changing economic conditions and makes it in fact very like a fixed indebtedness instead of an equity ownership. On the other hand, the test of reproduction cost new adjusted to actual age and condition during inflationary periods could be too large a burden on the public and, during deflationary periods, unfair to the utility investors. So, the court said, the burden of the cases was that the solution falls as a matter of judgment somewhere between these two brackets. This allows the utility property to fluctuate in value but tends to even out the curve and flatten the extremes of economic cycles.

### *Return Allowance*

The court said that, in determining the going price of capital in the current market for the purpose of fixing a return allowance, consideration should be given to the fact that utility capital is secured in two broad categories. These are: first, borrowing, and, second, sale of stock.

Generally, money obtained by borrowing comes cheaper than through the sale of stock, and, generally, there is a fairly well-established ratio between the investment in stock and the amount which can be raised by borrowing. The governing statute prohibits a rate fixed upon the stocks and bonds issued by the utility, but, in determining the percentage rate of return necessary to raise capital, this statute does not prohibit a general consideration of the two methods of raising capital and arriving at a rate of return which is a composite of the two on the current market.

After reviewing all of the affidavits submitted to it, the court concluded that there were two genuine issues of material fact in the case. They were: What was the fair value of the company's property, and what was the lowest composite percentage rate of return which would induce the investment of adequate capital? It concluded that the trial court should make its own finding of fact based upon admissible evidence and test the new rate against its findings.

The court regretted that the legislature had not been more specific, saying that "for the legislature to enact such vague statutes that the attempt of the courts to apply them produces what might be labeled judicial legislation puts an undue strain upon the governmental system." *Texas R. Commission v. Houston Nat. Gas Corp. No. A-5557.*



## Bond-calling Restrictions Contrary to Public Interest

**I**N an order directed to all electric, gas, and telephone utilities in its jurisdiction, the Georgia commission declared that restrictions on the calling of utility bonds, where a lower rate of interest can be obtained, is contrary to the public interest. The commission recognized, how-

ever, that a reasonable call premium is appropriate. But such a premium ordinarily should not exceed the amount of interest for twelve months in advance and should decline over the life of the issue. It should not be affected by the purpose for which bonds are called for redemp-



## PUBLIC UTILITIES FORTNIGHTLY

tion. Under normal circumstances, said the commission, fair rate of return should be based upon cost of capital. Since rate of return is an element of the over-all cost of service, the level of the rate of return affects the level of rates for service. Arbitrary restrictions cannot be allowed to prevent a utility from obtaining cheaper

capital through a refunding of long-term debt. The commission indicated that it will not authorize in the future restrictive call provisions unless conclusive evidence is produced to prove that such restrictions are in fact in the public interest. *Re Restrictive Call Premiums on Bond Indenture*, February 28, 1956.

## Other Recent Rulings

*Return for Water Utility.* A rate increase calculated to produce a 5.5 per cent rate of return on a book cost rate base was authorized by the Wisconsin commission for a small water utility. *Re Village of Johnson Creek*, 2-U-4522, March 8, 1956.

*Subcarrier Charges.* In order to protect subcontracting dump truck carriers, the California commission required by rule that charges paid to underlying carriers (subcontractors) by overlying carriers (those contracting with shippers) be not less than 95 per cent of the total charges applicable under tariff rates. *Re Minimum Rate Tariff No. 7*, Decision No. 52388, Case No. 5437, December 20, 1955.

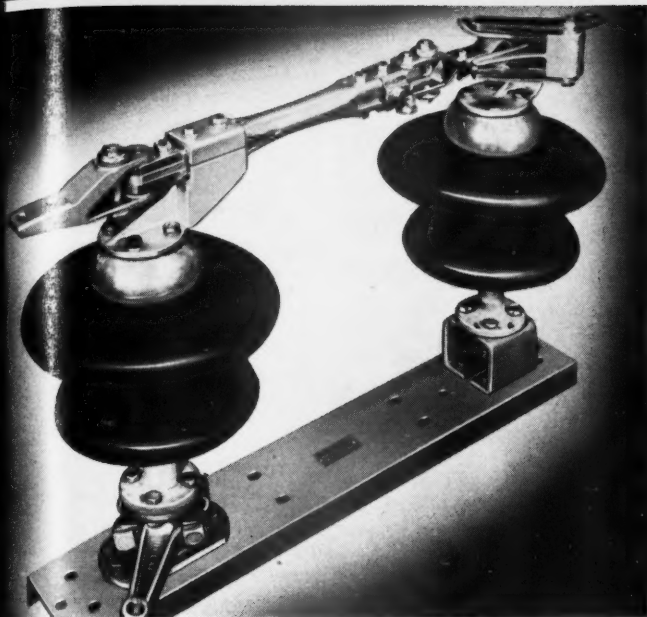
*Industrial Sidetrack Crossing at Grade.* The Connecticut supreme court of errors held that the commission had the power to authorize the laying of an industrial sidetrack which crosses a highway at grade, and that there was no consideration of public policy which precluded the commission from doing so. *Coppola v. New York, N. H. & H. R. Co.* 119 A2d 730.

*Television Permit.* The United States court of appeals held that an FCC finding that a newspaper and its subsidiary radio station had relatively small voice in the affairs of an applicant for a television permit, in that they owned only 40 per cent of the stock, did not contradict the com-

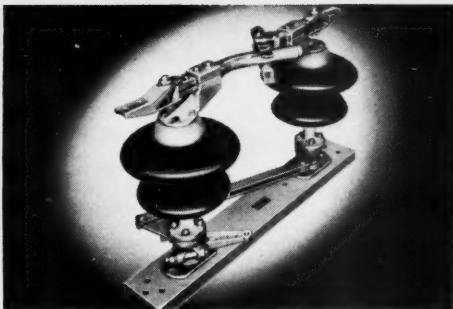
mission's conclusion that another applicant was superior with regard to diversification of the control of the media, since, however small the newspaper's voice in the first applicant's affairs might have been, the first applicant was not dissociated from existing media of mass communication as was the other applicant. *Columbia Empire Telecasters, Inc. v. Federal Communications Commission*, 228 F2d 459.

*Airline Trade Name.* Reversing an order of the Civil Aeronautics Board, a United States court of appeals decided that the use by an irregular airline of the name "North American" without more is not an unfair practice or unfair method of competition over which the board, in the public interest, has jurisdiction, notwithstanding contentions of American Airlines to the contrary. *North American Airlines, Inc. v. Civil Aeronautics Board*, 228 F2d 432.

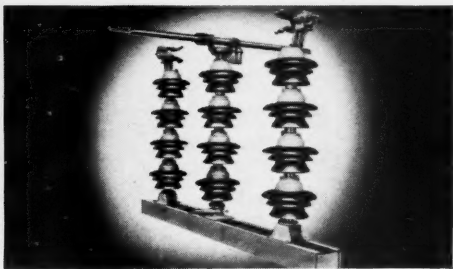
*Investigation without Hearing.* The Maryland court of appeals ruled that a statute vesting authority in the state commission to issue taxicab permits after investigating the expediency of granting them did not require a hearing, but contemplated only an investigation upon application for a permit. *Albert et al. v. Maryland Pub. Service Commission*, 120 A2d 346.



**NEW PMB-40 Braidless Side Break Switch** — ratings from 7.2 kv to 161 kv; 400, 600, and 1200 amperes.



**NEW PM-42 Braidless Center Break Switch** — ratings from 7.2 kv to 230 kv; 600, 1200 amperes.



**NEW PM-40 Braidless Double Side Break Switch** — ratings from 69-H kv to 330 kv; 600, 1200 and 1600 amperes.

## **NEW Delta-Star braidless side-break switches feature on-center contacts and low-friction swivels**

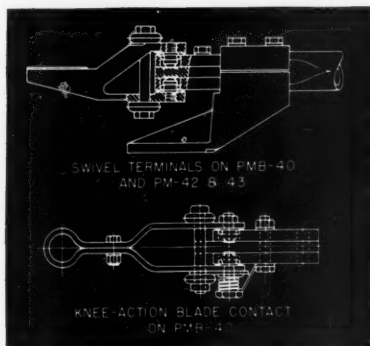
Delta-Star's new rotating contact design eliminates the serious problem of excessive friction at the swivel terminals. On PMB-40 and PM-40 Switches, the high-pressure contact is placed directly on the center of the rotating insulator. Heavy pressure at the swivel contact does not develop torsional resistance. The swivel terminal is supported by two pairs of ball bearings located out of the current path.

Blade and contact construction is patterned after Delta-Star's highly-regarded MK-40 vertical-break switches. Hard drawn copper contact shoes with silver inlays are backed by non-current carrying, beryllium copper leaf springs. Large deflections assure uniform contact pressure after years of wear. Rotating hinge and knee action blade contacts, with silver button pressure units, are factory-sealed.

Bearings are rustless, greaseless—completely sealed against the elements—require no lubrication during the lifetime of the switch. Double race balls and races are stainless steel.

Here are horizontal-break *braidless* switches that operate effectively, successfully and most satisfactorily—if operated only rarely or frequently. They are yours now for improved operating efficiency.

*For all the facts, call your nearby Delta-Star representative*



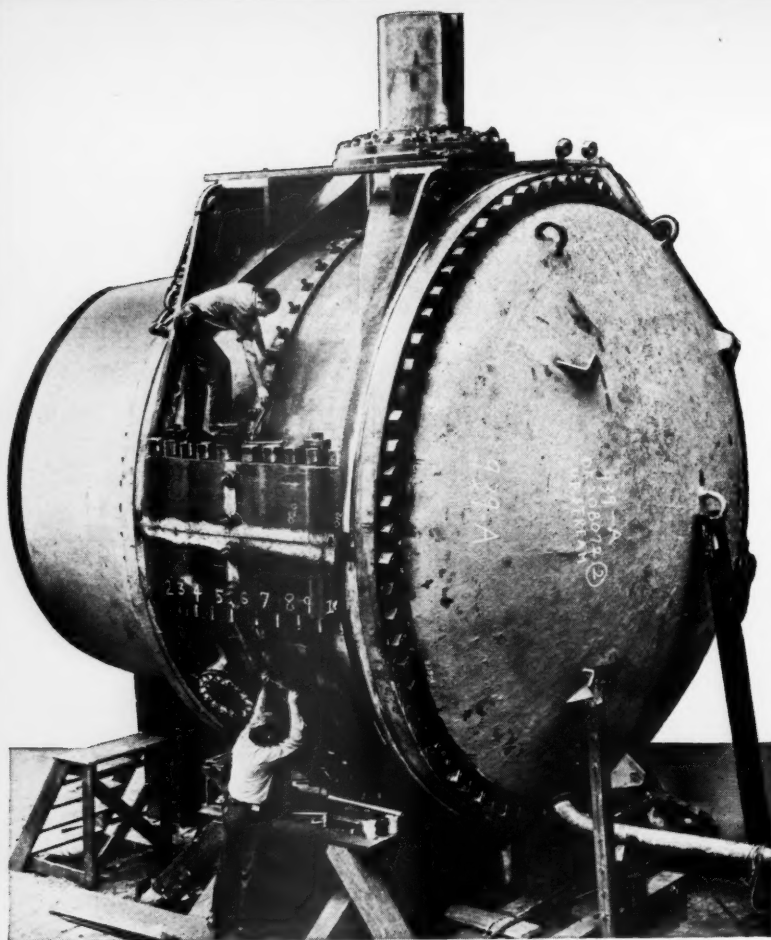
Diagrams above show construction details of the low friction swivel terminal contacts.



### **DELTA-STAR ELECTRIC DIVISION**

### **H. K. PORTER COMPANY, INC.**

2437 Fulton Street • Chicago 12, Illinois • District offices in principal cities



This 16-Foot Butterfly Valve illustrates the type of work which Newport News takes in stride. Newport News built 3 such valves, each weighing 446,000 lbs., for the Ross Power Plant, Skagit Project, Department of Light, City of Seattle, Washington. Designed for a water flow of 3,620 cu. ft. per sec., and a hydrostatic pressure of 290 psi, these valves were shop tested by Newport News at 450 psi. They are hydraulically operated with oil at 1,500 psi. pressure. Shop tests assure speedy, trouble-free assembly of Newport News built equipment, on the site.

## The TEST of a TITAN

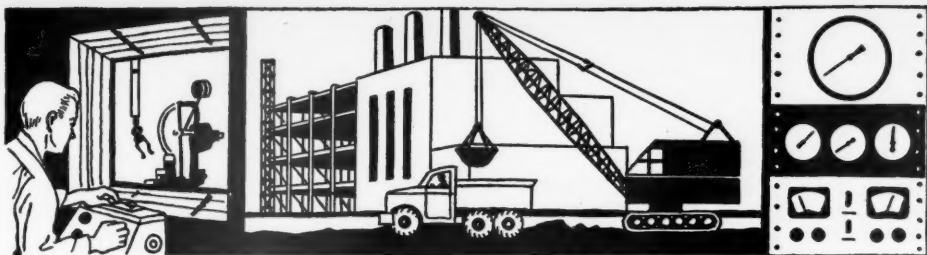
Here is one of the largest high head butterfly valves ever built, undergoing a shop test at Newport News. If you had an opportunity to follow this unit from start to finish, you would see *first hand* how Newport News produces massive equipment *economically*. For economy is a basic advantage that results from Newport News' high integration of skill and production facilities.

Large engineering and technical staffs, operating a plant comprising acres of brass, iron and steel foundries, five huge machine shops and other extensive fabricating facilities, have made Newport News one of the world's largest producers of hydraulic turbines, valves, gates, penstocks and other essential equipment... both standard and special in design.

Let us bid on your equipment. Write us today for your copy of "Water Power Equipment."

### NEWPORT NEWS

**SHIPBUILDING AND  
DRY DOCK COMPANY**  
Newport News, Virginia



# Industrial Progress

## Illinois Bell Plans Expansion Outlay Totaling \$137 Million

CONSTRUCTION expenditures of Illinois Bell Telephone Company will reach a record \$137,000,000 this year, V. Kahler, president, reported to shareholders.

The company plans to install 223,000 telephones in 1956, more than in any previous year.

## Indianapolis Power & Light Lets Contract For Power Plant Addition

INDIANAPOLIS Power & Light Company has retained Gibbs & Hill, Inc., New York consulting engineers, to design and supervise construction of a 105,000 kilowatt extension to its Harding street steam-electric generating station at Indianapolis, Indiana. Representing an investment of approximately \$15,000,000, the Harding street plant extension is part of Indianapolis Power & Light Company's expansion program launched this year for completion in 1958 to meet the projected increase in electric power demand resulting from the continuing growth of the Indianapolis area.

The new 105,000 kw. extension will bring the Harding street station's total generating capacity up to 265,000

would go toward the construction of three new generators the company is building at Astoria, Long Island, on Staten Island and in Buchanan, N. Y., that will boost Con Edison's capacity by about 900,000 kilowatts to a total of more than 4.6 million kw. in 1960.

The remaining \$450,000,000 will be spent mostly on new electricity transmission and distribution lines.

## Northern States Power Sets \$117,000,000 for Expansion

NORTHERN States Power Company plans to spend \$117,000,000 for expansion and modernization in 1956, 1957 and 1958, Allen S. King, president, said in the company's annual report.

The new construction budget calls for the expenditure of \$40,000,000 this year, \$39,000,000 in 1957 and \$38,000,000 in 1958.

Mr. King said a new 100,000 kilowatt generator will be put into service at the utility's High Bridge plant in St. Paul later this year that will boost the company's total generating capacity to nearly 1,500,000 kilowatts.

## Supercritical and Conventional Pressure Study by A-C

ECONOMIC advantages and disadvantages of the supercritical-pressure steam power plant, as compared with a conventional-pressure steam power plant, are presented in new literature released by Allis-Chalmers Manufacturing Company.

Substance for the comparison for a specific application, using a 2400-psig 1050/1000-F plant as a base with which to compare two supercritical-pressure plants is the paper by J. J. Fleischmann, A. H. Gibeling and Arthur Mergy of Allis-Chalmers steam turbine department, and E. R. Miller of the company's research division, presented at the American Power

Conference held on March 22, 1956.

The paper presents a design for a turbine operating at 3500-psig 1150 F inlet conditions. The design and operational features of other components of a supercritical cycle are discussed, and an economic evaluation of the estimated station incremental costs of heat-rate gains is given.

It is concluded from the study that supercritical-pressure plants can be economically justified for a large steam turbine application. However, the initial steam temperature selected for use in conjunction with the supercritical pressure has a major influence on costs, and thereby, on the conclusions drawn from the cost analysis.

Copies of the paper, "A Comparative Study of a Large Steam Turbine Application for Supercritical and Conventional Pressures," 03R8432, are available on request from Allis-Chalmers Manufacturing Company, 965 S. 70th Street, Milwaukee, Wisconsin.

## Consumers Power Plans 1,000,000 Kw Capacity Increase

A HALF-BILLION dollar construction and expansion program, and a 1,000,000 kilowatt power capacity increase were features of Consumers Power Company estimates projected by Dan E. Karn, president, at a meeting of the New York Society of Security Analysts recently.

The half-billion dollars is estimated to be the construction and expansion requirement of Consumers Power Company in meeting the electric and natural gas service growth of its Out-state Michigan area between now and 1960. With a record \$91,000,000 program budgeted for 1956, Mr. Karn viewed the possibility of such expenditures rising to an annual level of \$125,000,000 by 1960, according to company studies.

(Continued on page 22)

## Con Edison of New York, Plans \$650,000,000 Five-Year Expansion

CONSOLIDATED Edison Company of New York expects to spend roughly \$650,000,000 on expansion between 1956 and 1960, President Richard C. Forbes said in the company's annual report.

The precise disposition of the funds has not yet been determined, but it is expected that nearly \$200,000,000



## INDUSTRIAL PROGRESS—(Continued)

Announcement of the 1-million kilowatt program of electric generating capacity expansion is in addition to current construction now under way. The new plans cover the construction of four 250,000 kilowatt units scheduled for service between 1959 and 1962.

This power expansion will increase electric generating resources by 94 per cent to a total of more than 3,000,000 kilowatts by 1962 on the basis of present planning. All present and projected construction is in thermal-type units.

### Michigan Bell to Spend a Record \$91,000,000 in '56

A RECORD \$91,000,000 construction program for 1956 was announced by Michigan Bell Telephone Company.

William M. Day, president, said the outlay will be required to meet heavy demand for service throughout the company's territory. He said the utility is adding telephones at the rate of over 12,000 a month and now has 2,400,000 phones in service.

He noted that prior to this year Michigan Bell had spent over \$486,000,000 for new construction since World War II.

### Sylvania Plans Multi-million-Dollar Expansion in Nuclear Power Field

A MULTI-MILLION dollar expansion program in the atomic power field was announced recently by Sylvania Electric Products Inc.

Don G. Mitchell, Sylvania chairman and president, said that the first step of the program, which will extend over the next five years, will be new production and development facilities for nuclear fuels and components. The new production plant and laboratory will be constructed on one of several sites under consideration in the East, Mr. Mitchell said.

"Sylvania's new long-range program is designed to accelerate realization of the enormous potential of atomic power," Mr. Mitchell said. "The prime bottleneck in achieving efficient and low-cost nuclear power is the development of new and better

nuclear fuels and other materials reactors. Breaking that bottleneck providing an assured supply of fuel and components will be the object of our greatly expanded program.

The new production and engineering facility, entirely owned by Sylvania, will be completed by late 1958, according to Walter E. Kingston, general manager of the company's Atomic Energy Division.

Included in the over-all expansion program is the eventual establishment of a complete "out-of-pile" fuel service for nuclear reactors, Mr. Kingston said, noting that this phase had been previously announced. "At the earliest practical date, we plan to be in position to provide the reactor power industries of this country with a complete and integrated fuel and processing service," he declared.

Commenting on the potential of atomic power, Mr. Mitchell estimated that the nation's consumption of electricity will more than double in the next decade, reaching 1 trillion kilowatt hours by 1965. Although most of this power will be generated by

(Continued on page 24)

More for your Money in

## MORYSVILLE



*Best  
Body-  
Best  
Buy*

New Line Construction Body for single or dual wheel chassis from  $\frac{1}{2}$  to 2 tons. Length from 8' to 14' (CA's from 48" to 120"). Sliding roof for derrick; ample storage space inside and out. Many plus features at no extra cost.

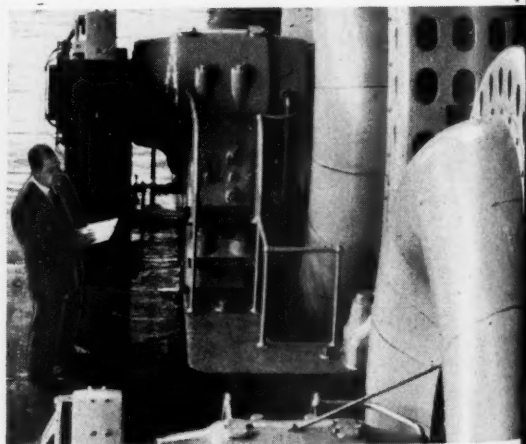
- 14 and 16 ga. Body Steel (14 ga. throughout for models rated 1 ton up—19 ga. doors).
- $\frac{1}{8}$ " Diamond Floor Plate.
- 5" Structural Channel Under-structure.
- Electric Welded throughout.
- Telescoping Roof with weather tight, easy sliding action.
- One piece Smooth Welded Drawers and Compartments.
- Vertical or Horizontal Flush Doors with recessed, spring loaded latches at no extra charge.
- Concealed metal Winch Box.
- Curbside Access to tools and equipment used most frequently.
- Vertical Compartments for climbers, lines and linemen's tools.
- Large, inside ventilated, Rubber Goods Compartment.
- Two piece Front Window in crew compartment.
- Bit and Chisel Drawer; Trough for Drills, Tamps, Rods, etc.
- Fendix Undercoating at no extra charge.

**IMMEDIATE DELIVERY • Distributors in Principal Cities**

"BODIES YOU CAN  
DEPEND ON' TO  
LAST INDEFINITELY

**MORYSVILLE**  
*Body Works INC.*

813 SOUTH READING AVE., BOYERTOWN, PENNA.



## American Appraisals meet the requirements of Trust Indenture

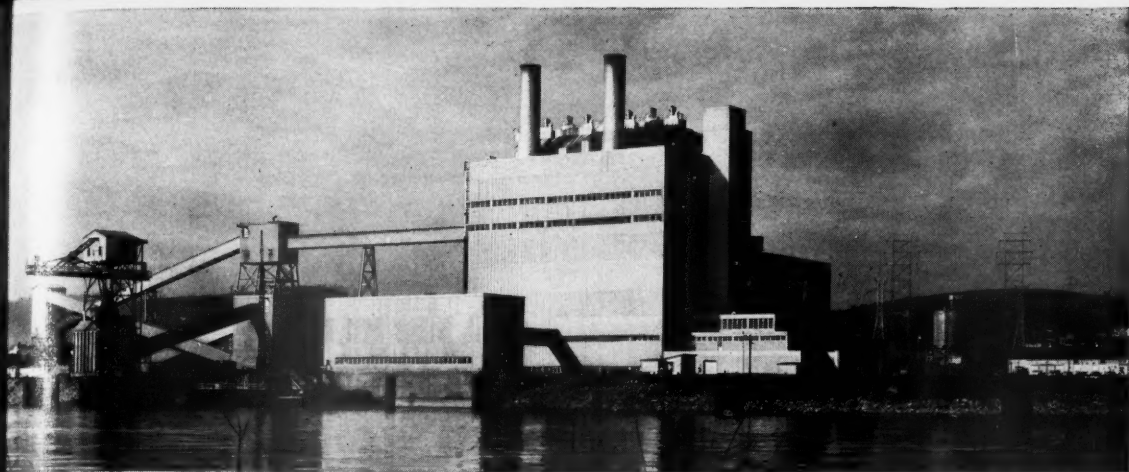
An American Appraisal provides all needed facts when the trustee must furnish an authoritative certificate of value, or verify the existence and condition of all assets.

**The  
AMERICAN APPRAISAL  
Company**

Leader in Property Valuation  
Home Office: Milwaukee 1, Wisconsin

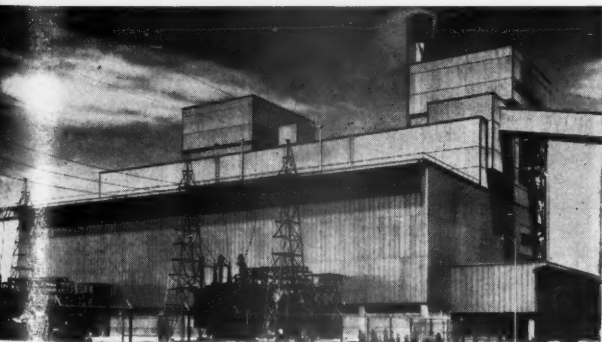


rials  
necks  
of the  
object  
gram  
engine  
Ly S  
te B  
on, g  
n-pa  
cyans  
sh  
nel se  
ings  
ad b  
ne e  
be t  
(or  
ry w  
and  
red.  
ntial  
stima  
of e  
t in  
on k  
mos  
by c  
)

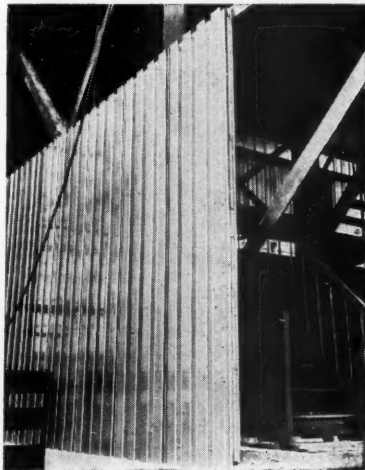


## Why fine new power plants everywhere have Q-Panel Walls

Builders of new power plants in all parts of the country have specified Q-Panel walls for the following very good reasons: 1. Q-Panels are permanent, dry and noncombustible, yet may be dismantled and re-erected elsewhere to keep pace with expansion programs. 2. Q-Panels are light in weight, thus reducing the cost of framing and foundations. 3. Q-Panels have high insulation value . . . superior to a 12" masonry wall. 4. Q-Panels are quickly installed because they are hung, not piled up. An acre of wall has been hung in 3 days. For more good reasons for using Q-Panel construction, use the coupon below and write for literature.



Q-Panel walls grace the new Elrama Power Plant (above) near Pittsburgh. It was designed by Duquesne Light Company's Engineering and Construction Department. The Dravo Corporation was General Contractor.



Q-Panel walls (above) go up quickly in any weather because they are dry and hung in place, not piled up.

More than 32,000 sq. ft. of Q-Panels were used to enclose the impressive Hawthorn Steam Electric Station (left) of the Kansas City, Missouri, Power and Light Company. Ebasco Services, Inc., designed and built the plant.



Please send a free copy of your Q-Panel Catalog.

NAME

FIRM

ADDRESS

PUFI

# Robertson Q-Panels

## H. H. Robertson Company

2424 FARMERS BANK BLDG. • PITTSBURGH 22, PA.

Offices in Principal Cities



**SNUG TO THE WALL** of a railroad underpass is the trench being dug by this compact Cleveland "Baby Digger." Its ability to put the edge of a trench within less than two feet of a parallel wall is but one of this Cleveland's many practical operating advantages.



**DIGGING CLEAN AND FAST** the same Cleveland "Baby Digger" turned out high daily production on this job. With more than 30 usable digging speeds at the operator's command, the Cleveland cut cleanly through pavement and heavy root growth for trench 22 inches wide by 41 inches deep. Performance like this has made Cleavelands *first choice* in the gas industry for over 30 years.

*Talk it over with your Cleveland distributor*

**THE CLEVELAND TRENCHER COMPANY • 20100 St. Clair Ave., Cleveland 17, Ohio**



**CLEVELAND**

## INDUSTRIAL PROGRESS (Continued)

ventional fuels, an increasing proportion will be generated by nuclear-fueled power stations, he said.

"By 1970, at least 5 per cent of country's generating capacity will be nuclear-powered, and by 1980, nuclear-powered capacity will be near 20 per cent of the total. This will represent a probable investment of \$8 billion," the Sylvania chief executive said. Indicating the steady growth of the industry, about 40 per cent of power plants completed in 1980 will use nuclear fuels, he predicted.

### Atlantic City Elec. To Spend \$72,000,000 on Construction

ATLANTIC City Electric Company will spend \$72,000,000 for new construction in the next 5 years, according to Bayard L. England, president. \$14,400,000 will be spent during 1980, an increase of \$5,000,000 over 1979. New generating facilities already started at Deepwater generating station will require over \$6,000,000; the balance will be spent in transmission and distribution facilities at general plant. Another unit of 75,000 KW capacity will be started in 1981.

### Delta-Star Releases New Publication Describing B-2K Switches

DELTA-STAR Electric Division, K. Porter Company, Inc., has released a new six page publication describing in detail their complete line of B-2K single-pole outdoor, hook operated disconnecting switches.

This easily read publication is fully illustrated to clearly explain the B-2K switch design, construction, and operation. Types for upright, vertical and inverted mounting, with ratings from 7.2 to 115 Kv; 400, 600, and 1200 amperes, are listed.

Complete tables give catalog numbers, nominal ratings, and dimensions as well as maximum design voltage, impulse withstand voltage, and momentary current ratings.

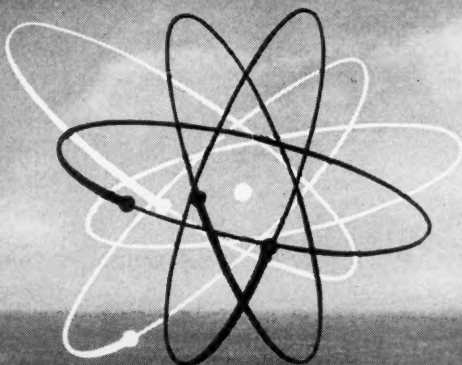
### Peninsular Telephone Plans Record-Breaking Program

A RECORD-BREAKING \$19,800,000 construction budget for 1980 has been approved by directors of the Peninsular Telephone Company, C. D. Brorin, president, announced recently.

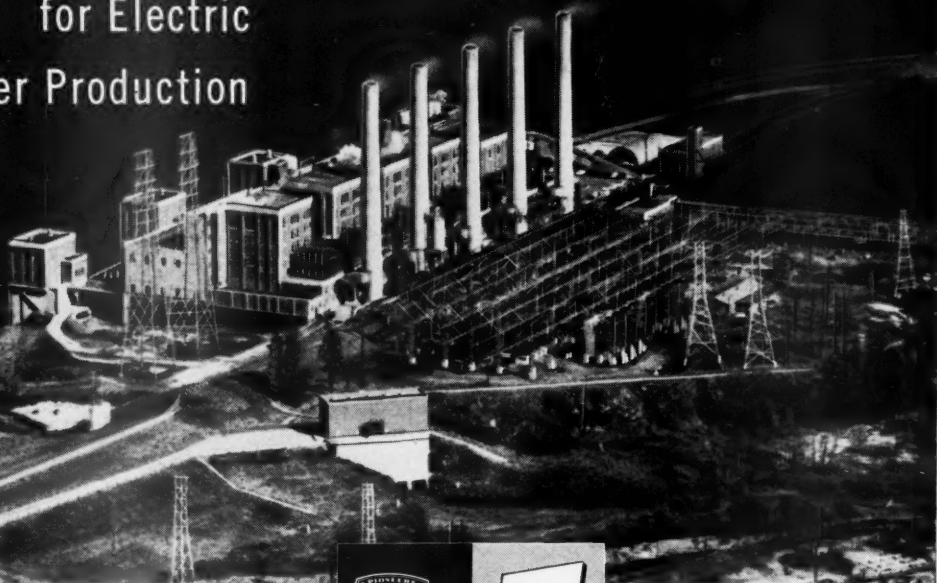
Mr. Brorin said the budget means expenditures of more than a million and a half dollars each month for

(Continued on page 26)

**TOMORROW**  
ready to help you  
Harness the Atom



**TODAY**  
ready to meet your  
immediate needs  
for Electric  
Power Production



**Pioneer Service & Engineering Co.**

231 SOUTH LA SALLE STREET • CHICAGO, ILLINOIS



Serving power plant needs of  
Industries and Utilities  
for 54 years.

Send for our descriptive booklet,  
"Pioneering New Horizons"



provement and expansion. It is an increase of \$4,000,000 over the amount spent in 1955.

### New 69 KV Outdoor Oil Circuit Breaker Announced by Federal Pacific Electric

NEW 69-kv oil circuit breakers, rated at 2000 amp, 350C mva and 5000 mva, with 5-cycle interrupting time and 20-cycle re-closing time, have been announced by R. W. Hutchinson, product sales manager for the Pacific Switchgear Division, Federal Pacific Electric Co., San Francisco, Calif.

The new breakers, designated as type AJ-54, feature improved expulsion interrupters; simple multi-set 6-shoe sliding solid-silver to solid-silver contacts; wide separation of

load break and arcing-break; non-critical closed position adjustment; and interrupters without self-charged springs.

The oil-hydraulic accumulator-type operating mechanism eliminates the need to remove moisture or frost from lines. Unusually complete use of hydraulics improves operation, particularly elimination of end-of-stroke shock. The mechanism provides direct line drive with main opening springs on pull-rod end and kick-off springs at each pole. Because of use of stored-energy operating mechanism, emergency manual closing is always at full speed under full force.

Federal Pacific Electric type AJ-54 oil circuit breakers are compact and semi-portable and are shipped ready for immediate operation.

### New International Harvester Catalog

COMPLETE information on a range of International trucks with factory-mounted Metro multi-stroke bodies is offered in a new 24-page catalog (form CR-619-F) made available by the motor truck division, International Harvester Company.

Color treatment is used throughout the book to present design and operating features of the eight S-Line forward control models in the SM-13, SM-130, SM-150 and SM-160 series that mount the various Metro bodies. Gross vehicle weight ratings range from 5,400 to 18,000 pounds. A wide range of body designs and capacities is offered. Detailed drawings show body measurements and basic features.

*This announcement is not an offer to sell or a solicitation of an offer to buy these securities.  
The offering is made only by the Prospectus.*

**\$40,000,000**

## The Columbia Gas System, Inc.

**3⅞% Debentures, Series F Due 1981**

Dated April 1, 1956

Due April 1, 1981

*Price 100.399% and accrued interest*

*The Prospectus may be obtained in any State in which this announcement is circulated from only such of the undersigned and other dealers as may lawfully offer these securities in such State.*

### HALSEY, STUART & CO. INC.

BEAR, STEARNS & CO.

A. G. BECKER & CO.  
INCORPORATED

BLAIR & CO.  
INCORPORATED

COFFIN & BURR  
INCORPORATED

DICK & MERLE-SMITH

HALLGARTEN & CO.

HORNBLOWER & WEEKS

LADENBURG, THALMANN & CO.

CARL M. LOEB, RHOADES & CO.

L. F. ROTHSCHILD & CO.

SCHOELLKOPF, HUTTON & POMEROY, INC.

SHEARSON, HAMMILL & CO.

AMERICAN SECURITIES CORPORATION

BACHE & CO.

BAXTER, WILLIAMS & CO.

R. S. DICKSON & COMPANY  
INCORPORATED

NEW YORK HANSEATIC CORPORATION

TUCKER, ANTHONY & CO.

WEEDEN & CO.  
INCORPORATED

BALL, BURGE & KRAUS

IRA HAUPT & CO.

H. HENTZ & CO.

STROUD & COMPANY  
INCORPORATED

SWISS AMERICAN CORPORATION

BURNHAM AND COMPANY

VAN ALSTYNE, NOEL & CO.

AUCHINCLOSS, PARKER & REDPATH

BURNS BROS. & DENTON, INC.

COURTS & CO.

HIRSCH & CO.

E. F. HUTTON & COMPANY

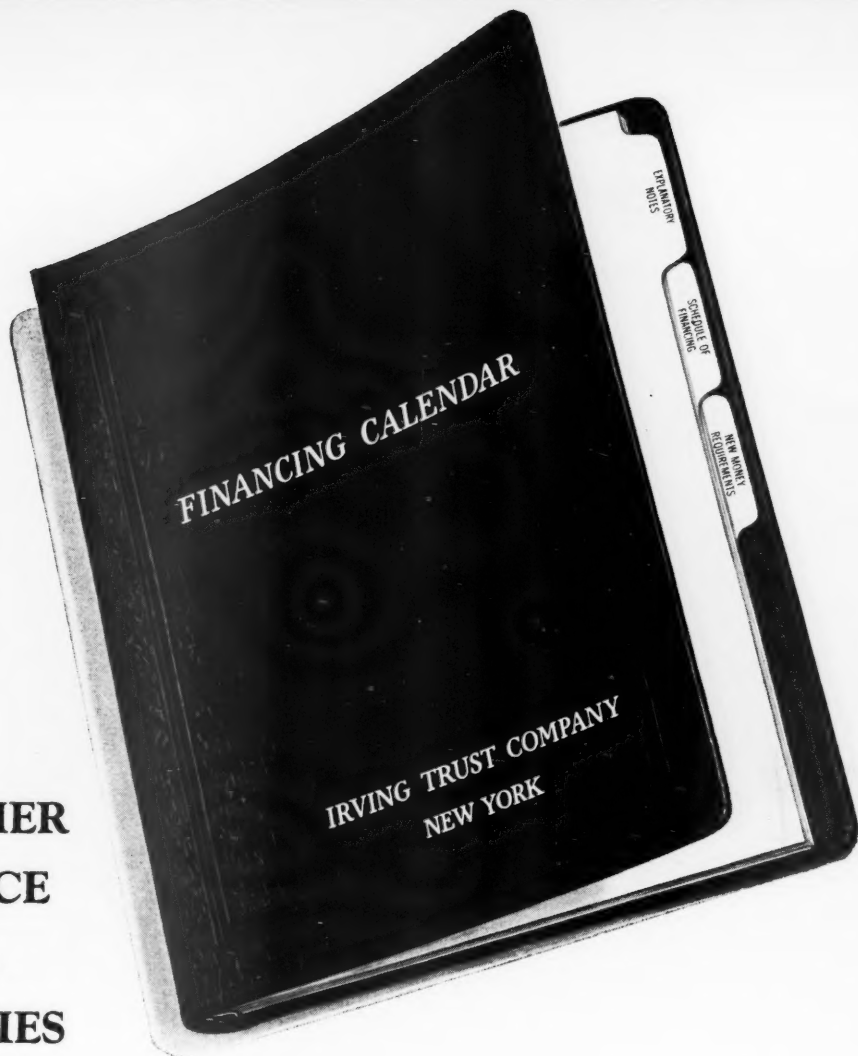
WM. E. POLLOCK & CO., INC.

STERN BROTHERS & CO.

April 11, 1956.

ster  
n  
s w  
i-st  
4-pa  
ava  
ion  
any  
ugh  
per  
ne i  
M-12  
ser  
odia  
ran  
A w  
ities  
ow  
ature

**ANOTHER  
SERVICE  
FOR  
UTILITIES**



## THE FINANCING CALENDAR

A comprehensive schedule of forthcoming security offerings, furnished regularly to utility companies to help prevent financing "log jams."

Better spacing of new offerings can mean higher prices to the issuers.

This service, available to the entire utility industry, has become feasible through the constant co-operation of the individual utility companies in furnishing their financing schedules.

## IRVING TRUST COMPANY

*One Wall Street, New York 15, N.Y.*

Capital Funds over \$126,000,000

WILLIAM N. ENSTROM, Chairman of the Board

Total Assets over \$1,500,000,000

RICHARD H. WEST, President

Public Utilities Department—JOHN F. CHILDS, Vice President in Charge

MEMBER FEDERAL DEPOSIT INSURANCE CORPORATION



*If your problem concerns* **UTILITY RATES,**  
*you will want these two companion volumes*

## **Preparing for the Utility Rate Case**

by Francis X. Welch,  
B. Litt., LL. B., LL. M.



320 pages  
Price \$10

**A**MONG the values of this compilation of experiences taken from the records of actual rate cases, are the reviews of methods and procedures, which have been found helpful in —

- ▶ simplifying and speeding up rate case groundwork
- ▶ saving time and expense of participants
- ▶ cutting down "lag losses"
- ▶ increasing the confidence of investors

*all of which are in the public interest.*

The volume does not offer a program of standardized procedures for rate case preparation, but reviews the plain and practical methods that have been used.

The *chapter headings* indicate the coverage:

The Birth of the Utility Rate Case  
Public Relations and the Rate Case  
The Birth of Utility Company Rate Opposition  
The Nature of the Utility Rate Proceeding  
Events Leading Up to the Rate Case  
Selection and Function of the Attorney  
The Grand Strategy of the Rate Case  
The Mechanics of Rate Case Preparation  
Proof of the Rate Base  
The Completed Rate Base—Overheads, Land, Depreciation, Working Capital  
Completing the Rate Base; Working Capital  
Operating Expenses  
Operating Expenses, Continued—  
Annual Depreciation  
The Rate of Return  
Rate Adjustments—Allocations

*Never before has anyone attempted to bring together, in relatively small compass, a comparable exposition and guide.*

## **Conduct of the Utility Rate Case**

by Francis X. Welch,  
B. Litt., LL. B., LL. M.



400 pages  
Price \$12.50

**T**HIS companion volume deals with those procedural matters which come after the preparatory stages of the rate case. It presents for the first time the practical problems of conducting the case —

- ▶ filing the application
- ▶ introducing the evidence
- ▶ examining the witnesses, etc.

In fact, it explains the time-saving and effective ways of making the step-by-step progress toward the rate decision, including information concerning the requirements for appeal and review.

Here are the *chapter headings*:

Assisting In the Rate Case Preparation  
The Formal Approach to the Rate Case  
The Attorney-Client Relationship  
Preparing The Petition or Application  
Preparing the Testimony  
Parties—Rate Complaints—Rate Investigations  
Negotiations Before Hearing—  
Prehearing Proceedings  
Setting and Opening The Hearing  
Examination In Chief  
Cross-Examination and Rebuttal  
Evidence in a Rate Case  
The Case for Complainants or Rate Increase Protestants  
The Expert Witness  
Motions, Interlocutory Procedures, Arguments, Briefs and Decisions  
Appeal and Review

**PUBLIC UTILITIES REPORTS, INC., Publishers**  
**NEW BOOK DEPARTMENT**  
**309 MUNSEY BUILDING**  
**WASHINGTON 4, D. C.**



## FOR EXECUTIVE DECISIONS . . . .

FINANCING  
RATES  
INSURANCE  
TAXES  
DEPRECIATION  
ACCOUNTING  
PURCHASING  
GAS OPERATIONS  
CORPORATE  
PENSIONS AND WELFARE  
BUSINESS DEVELOPMENT  
INDUSTRIAL RELATIONS  
PUBLIC RELATIONS  
STOCK TRANSFER  
PROXY SOLICITATIONS  
GENERAL CONSULTATION

ENGINEERING—CONSULTING AND DESIGN

Whether in general operations, financing, engineering or other matters of business, the consulting and advisory services of Commonwealth can be of material assistance.

Informed executives and boards of directors rely on competent investigation and analysis as the basis of reports and studies leading to decision. In a day of involved regulatory rules and requirements, coupled with rapid changes in business conditions, the services of experienced consultants in special fields can be of great value.

Commonwealth's organization is prepared to assist you in such matters.

**Send for our booklet . . .**

*It may point out sources of help for you*

# COMMONWEALTH SERVICES INC.

300 PARK AVE., NEW YORK 22, N. Y.

WASHINGTON, D. C.

JACKSON, MICHIGAN

HOUSTON, TEXAS



**COMMONWEALTH ASSOCIATES INC.**  
The Commonwealth Professional Engineering Organization

# PROFESSIONAL DIRECTORY

• This Directory is reserved for engineers, accountants, rate experts, consultants, and others equipped to serve utilities in all matters relating to rate questions, appraisals, valuations, special reports, investigations, financing, design, and construction. » »

## BLACK & VEATCH CONSULTING ENGINEERS

Electricity, Natural Gas and Water Utilities  
Production, Transmission, Distribution  
Reports, Design, Supervision of Construction  
Investigations, Valuation and Rates  
4706 BROADWAY, KANSAS CITY 2, MISSOURI (SINCE 1915)

## DAY & ZIMMERMANN, INC.

ENGINEERS

NEW YORK

PHILADELPHIA

CHICAGO

DESIGN, CONSTRUCTION, REPORTS, APPRAISALS AND MANAGEMENT



PROPANE PLANTS

★ Standby

★ Augmentation

★ 100% Town Supply

Design • Engineering • Construction

DRAKE & TOWNSEND

11 WEST 42ND STREET NEW YORK 36, N. Y.



**Ford, Bacon & Davis**  
VALUATION ENGINEERS CONSTRUCTION  
REPORTS RATE CASES

NEW YORK • CHICAGO • LOS ANGELES



**GIBBS & HILL, INC.**

CONSULTING ENGINEERS  
DESIGNERS • CONSTRUCTORS

NEW YORK

LOS ANGELES



**GILBERT ASSOCIATES, INC.**

ENGINEERS • CONSULTANTS • CONSTRUCTORS

607 WASHINGTON ST.  
READING, PA.

• WASHINGTON • PHILADELPHIA • NEW YORK

**W. C. GILMAN & COMPANY**

CONSULTING ENGINEERS

ELECTRIC — GAS — TRANSIT — WATER

Financial and Economic Reports

Valuations—Rate of Return—Depreciation Studies

Traffic Surveys—Fare Analyses

55 Liberty Street

New York 5, N. Y.

Mention the FORTNIGHTLY—It identifies your inquiry

PROFESSIONAL DIRECTORY (continued)

**GUSTAV HIRSCH ORGANIZATION, INC.**

1347 West 5th Ave., Columbus (12) Ohio

Telephone Hudson 8-0611

*Consulting and Supervisory Engineers and Contractors  
Construction and Operation of Utility Enterprises*

**HOOSIER ENGINEERING COMPANY**

*Erection and Maintenance of  
Electrical Transmission and Distribution Lines*

1384 HOLLY AVENUE

COLUMBUS, OHIO

**JENSEN, BOWEN & FARRELL**

ENGINEERS

ANN ARBOR, MICHIGAN

APPRAISALS—INVESTIGATIONS—DEPRECIATION STUDIES—  
COST TRENDS — REPORTS

*for Rate Cases, Security Issues, Regulatory and Accounting Requirements*  
ORIGINAL COST AND CONTINUING PROPERTY RECORD  
DETERMINATION



*The Kuljian Corporation*

ENGINEERS • CONSTRUCTORS  
POWER PLANT SPECIALISTS

DESIGN • CONSTRUCTION • MANAGEMENT  
SURVEYS • INVESTIGATIONS • REPORTS

1200 N. BROAD ST., PHILADELPHIA 21, PA.

**William S. Leffler, Engineers Associated**

NOROTON, CONNECTICUT

*Utility Management Consultants Specializing in*

**COST ANALYSIS**

*for past 35 years*

Send for brochure: "The Value of Cost Analysis to Management"

GAS  
ELECTRIC  
WATER

REGULATORY  
AND  
MUNICIPAL  
PROBLEMS

**N. A. LOUGEE & COMPANY**

*Engineers and Consultants*

REPORTS—APPRAISALS—DEPRECIATION STUDIES

RATE CASES—BUSINESS AND ECONOMIC STUDIES

120 Broadway

New York

**CHAS. T. MAIN, INC.**

*Power Surveys—Investigations—Valuations—Reports*

*Steam, Hydro Electric and Diesel Plants*

*Gas Turbine Installations*

BOSTON, MASS.

CHARLOTTE, N. C.

(Professional Directory Continued on Next Page)

PROFESSIONAL DIRECTORY (continued)

**MIDDLE WEST SERVICE COMPANY**

*Business and Engineering Consultants*

(INCLUDING JAY SAMUEL HARTT CONSULTING ENGINEERS)

Organization • Corporate Practices • Accounting • Budgeting • Financing • Taxes • Stock Transfer • Appraisals • Valuations • Economic Analysis • Cost of Money Studies • Depreciation Studies • Engineering • System Planning • Industrial Engineering • New Business • Rates • Pricing Sales and Marketing • Safety • Insurance • Pensions • Employee Welfare • Public Relations • Advertising • Personnel • Industrial Relations

20 NORTH WACKER DRIVE • CHICAGO 6, ILLINOIS

**Pioneer Service & Engineering Co.**

CONSULTING, DESIGNING AND  
OPERATING ENGINEERS  
PURCHASING

231 SOUTH LA SALLE STREET



SPECIALISTS IN  
ACCOUNTING, FINANCING, RATES,  
INSURANCE AND DEPRECIATION

CHICAGO 4, ILLINOIS

**SANDERSON & PORTER**

ENGINEERS  
AND  
CONSTRUCTORS

**S & P**

**Sargent & Lundy**  
ENGINEERS

*Steam and Electric Plants*

*Utilities—Industrials*

*Studies—Reports—Design—Supervision*

Chicago 3, Ill.

**STONE & WEBSTER**  
ENGINEERING CORPORATION

Design • Construction • Reports • Appraisals  
Examinations • Consulting Engineering

NEW YORK  
SAN FRANCISCO

BOSTON

CHICAGO  
LOS ANGELES

PITTSBURGH  
SEATTLE

HOUSTON  
TORONTO



**The J. G. WHITE ENGINEERING CORPORATION**

*Design—Construction—Reports—Appraisals*  
*Consulting E. Engineering*

80 BROAD STREET

NEW YORK 4, N. Y.

**Whitman, Requardt and Associates**

**DESIGN — SUPERVISION**

**REPORTS — VALUATIONS**

1304 ST. PAUL STREET

Publishers of the 35-year-old  
**HANDY-WHITMAN INDEX**  
for Public Utility  
Construction Cost Trends  
Including Hydro-Electric Properties  
BALTIMORE 2, MARYLAND

*Mention the FORTNIGHTLY—It identifies your inquiry*



## PROFESSIONAL DIRECTORY (concluded)



### **Abrams Aerial Survey Corporation**

Topographic and Planimetric Maps  
Mosaics, Plans & Profiles for all  
Engineering work.

Abrams Bldg. Lansing, Mich.

### **PETER F. LOFTUS CORPORATION**



Design and Consulting Engineers

Electrical • Mechanical • Structural  
Civil • Thermodynamic • Architectural

FIRST NATIONAL BANK BUILDING  
Pittsburgh 22, Pennsylvania

### **EARL L. CARTER**

*Consulting Engineer*

REGISTERED IN INDIANA, NEW YORK, OHIO,  
PENNSYLVANIA, WEST VIRGINIA, KENTUCKY  
*Public Utility Valuations, Reports and  
Original Cost Studies*

910 Electric Building Indianapolis, Ind.

### **LUCAS & LUICK**

*ENGINEERS*

DESIGN, CONSTRUCTION SUPERVISION,  
OPERATION, MANAGEMENT, APPRAISALS,  
INVESTIGATIONS, REPORTS, RATES

231 S. LaSalle St., CHICAGO



Thoroughly Specialized  
**RIGHT-OF-WAY  
PROCUREMENT**

From Title Search . . .  
To Damage Claims

**COATES FIELD SERVICE**

P.O. BOX 1581 • OKLAHOMA CITY, OKLA.

### **LUTZ & MAY**

*Consulting Engineers*

STEAM, GAS & DIESEL POWER STATIONS  
PUMPING PLANTS—ELECTRIC SYSTEMS  
REPORTS—DESIGNS—APPRAISALS

1009 Baltimore

Kansas City 6, Mo.

**ENGINEERS, CONSTRUCTION AND  
MAINTENANCE CONTRACTORS  
for the GAS INDUSTRY**



**CONSOLIDATED  
GAS AND SERVICE CO.**

327 So. LaSalle St., Chicago 4, Ill.

### **MINER AND MINER**

**CONSULTING ENGINEERS**

INCORPORATED

GREELEY

COLORADO

**GANNETT FLEMING CORDRY AND CARPENTER, INC.**  
**ENGINEERS**

HARRISBURG, PENNSYLVANIA

Investigations—Reports—Appraisals

Original Cost and Depreciation Studies

Rate Analyses—Insurance Surveys

### **A. S. SCHULMAN ELECTRIC CO.**

*Electrical Contracting Engineers*

TRANSMISSION LINES—DISTRIBUTION—POWER  
STATION—INDUSTRIAL—COMMERCIAL  
INSTALLATIONS

CHICAGO

LOS ANGELES

### **FRANCIS S. HABERLY**

*CONSULTING ENGINEER*

*Valuation — Depreciation  
Investigations and Reports*

122 SOUTH MICHIGAN AVENUE, CHICAGO

### **SLOAN, COOK & LOWE**

**CONSULTING ENGINEERS**

120 SOUTH LA SALLE STREET

CHICAGO

Appraisals — Reports

Operating — Financial — Plant

### **JACKSON & MORELAND INC.**

*Engineers and Consultants*

Design and Supervision of Construction

Reports — Examinations — Appraisals

Machine Design — Technical Publications

BOSTON

NEW YORK

### **SVERDRUP & PARCEL, INC.**

*Engineers — Architects*

Design, Construction Supervision

Steam and Hydro Power Plants

Power Systems — Industrial Plants

Studies — Reports

St. Louis

• San Francisco

• Washington

Mention the FORTNIGHTLY—It identifies your inquiry

# INDEX TO ADVERTISERS

[The Fortnightly lists below the advertisers in this issue for ready reference. Their products and services cover a wide range of utility needs.]

A	
Abrams Aerial Survey Corporation	33
*Allen & Company	
*Allis-Chalmers Manufacturing Company	
American Appraisal Company, The	22
American Creosoting Company	Inside Front Cover
American Telephone & Telegraph Company	13
*Analysts Journal, The	
*Anderson Brass Work, Inc.	
B	
Babcock & Wilcox Company, The	4-5
Black & Veatch, Consulting Engineers	30
*Blyth & Company, Inc.	
C	
Carter, Earl L., Consulting Engineer	33
Cleveland Trencher Company, The	24
Coates Field Service	33
Columbia Gas System, Inc., The	16
Commonwealth Associates, Inc.	29
Commonwealth Services, Inc.	29
Consolidated Gas and Service Company	33
D	
Day & Zimmermann, Inc., Engineers	30
Delta-Star Electric Division, H. K. Porter Co., Inc.	19
*Divco Corporation	
Dodge Division of Chrysler Corp.	7
Drake & Townsend, Inc.	30
*Dresser Industries, Inc.	
E	
*Ebasco Services Incorporated	
*Electro-Motive Division, General Motors	
F	
*First Boston Corporation, The	
Ford, Bacon & Davis, Inc., Engineers	30
G	
Gannett Fleming Corddry and Carpenter, Inc.	33
General Electric Company	Outside Back Cover
Gibbs & Hill, Inc., Consulting Engineers	30
Gilbert Associates, Inc., Engineers	30
Gilman, W. C., & Company, Engineers	30
*Glore, Forgan & Company	
*Guaranty Trust Company of New York	
H	
Haberly, Francis S., Consulting Engineer	33
Halsey, Stuart & Company, Inc.	26
*Harriman Ripley & Company	
Hirsch, Gustav, Organization, Inc.	31
Hoosier Engineering Company	31
I	
International Business Machines Corp.	15
*International Harvester Company, Inc.	
Irving Trust Company	27
J	
Jackson & Moreland, Inc., Engineers	33
Jensen, Bowen & Farrell, Engineers	31
K	
*Kellogg M. W., Company, The	
Kerite Company, The	14
*Kidder, Peabody & Company	
*Kuhn Loeb & Company	
Kuljian Corporation, The	31
L	
*Langley, W. C., & Co.	
Leffler, William S., Engineers Associated	31
*Lehman Brothers	
*Loeb (Carl M.) Rhodes & Co.	
Loftus, Peter F., Corporation	33
Lougee, N. A., & Company, Engineers	31
Lucas & Luick, Engineers	33
Lutz & May, Consulting Engineers	33
M	
Main, Charles T., Inc., Engineers	31
*Matthews, Jas. H., & Company	
*McCabe-Powers Auto Body Company	
*Merrill Lynch, Pierce, Fenner & Beane	
Middle West Service Company	32
Miner and Miner	33
*Morgan Stanley & Company	
Morysville Body Works, Inc.	22
Motorola Communications & Electronics, Inc.	Inside Back Cover
N	
*National Association of Railroad & Utilities Commissioners	
Newport News Shipbuilding & Dry Dock Co.	20
*Nuclear Development Associates, Inc.	
P	
*Pacific Pumps, Inc.	
Pioneer Service & Engineering Company	25, 32
R	
Recording & Statistical Corporation	11
Remington Rand Div. of Sperry Rand Corp.	9
Robertson, H. H., Company	23
S	
*S & C Electric Company	
Sanderson & Porter, Engineers	32
Sargent & Lundy, Engineers	32
Schulman, A. S., Electric Co., Engineers	33
*Schutte and Koerting Company	
Sloan, Cook & Lowe, Consulting Engineers	33
*Smith, Barney & Company	
*Southern Coal Company, Inc.	
*Sprague Meter Company, The	
Stone and Webster Engineering Corporation	32
Sverdrup & Parcel, Inc., Engineers	33
T	
*Texas Eastern Transmission Corporation	
U	
*Underwood Corporation	
*Union Securities Corporation	
W	
*Western Precipitation Corporation	
White, J. G., Engineering Corp., The	32
Whitman, Requaardt and Associates	32
*Wright Power Saw and Tool Corporation	

Professional Directory 30-33

\*Fortnightly advertisers not in this issue.

important new **"PLUS FACTOR"** of the Motorola Twin-V Radiophone

MOBILE



# TRANSISTORIZED DYNAMIC MICROPHONE

**Unprecedented voice clarity  
for mobile radio transmission**

- true moving coil dynamic characteristics
- transistor preamplifier built-in
- printed circuit
- all-metal housing
- retains popular size and shape
- superior voice reproduction
- unexcelled reliability.



The new transistorized dynamic microphone, or the dual purpose dynamic "Speaker-Mike," is optionally available with Motorola's "TWIN-V" Radiophone—the world's finest FM 2-way mobile radio unit . . . incorporating many exclusive features, including universal 6/12 volt operation, Sensicon receiver, Permakay Filter, and Instantaneous Deviation Control.

Motorola's new transistorized dynamic microphone provides *mobile* transmission quality comparable to that of the base station. Unexcelled voice clarity, crispness, and intelligibility are yours in this newest Motorola *first*.

## Also available as "SPEAKER-MIKE"

The new microphone can be furnished as a dual-purpose "Speaker-Mike" which functions as a full output communications-type *loudspeaker*, as well as a dynamic microphone. It can be conveniently mounted, or held near the operator's ear to overcome high ambient noise levels.



You can have either of these outstanding microphones as replacement items, or as *optional* equipment with new Motorola "TWIN-V" Radiophones. The transistorized, dynamic microphone, with its *popular palm size*, is directly interchangeable with Motorola carbon models now in use. The "Speaker-Mike" version requires a simple modification kit for replacement use in existing equipment.

*Immediately available. Write, phone or wire today, or contact your local Motorola Radio Communications Engineer.*

# MOTOROLA COMMUNICATIONS & ELECTRONICS, INC.

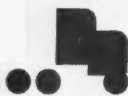
A SUBSIDIARY OF MOTOROLA, INC., 4501 AUGUSTA BOULEVARD, CHICAGO 51, ILLINOIS



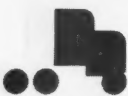
**REDUCED MAINTENANCE COSTS** are offered by G-E mobile unit substations. Above, J. B. Monk, G-E Mgr.—Power Transformer Sales, discusses with T. W. Schroeder, Chief Engineer of The Illinois Power Co., the increased acceptance of the units, which typifies great utility interest in new approaches to cutting maintenance costs.

## Mobile substations typify utility trend to lower-cost maintenance

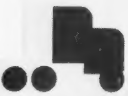
**3750 KVA**  
APPROX. 45,200 LBS.\*



**5000 KVA**  
APPROX. 48,000 LBS.\*



**7500 KVA**  
APPROX. 55,200 LBS.\*



**10,000 KVA**  
APPROX. 62,500 LBS.\*



\*LESS TRACTOR

**MOBILE SUBSTATIONS** will open new frontiers for cutting expenditures for many companies. G-E units are available in a variety of ratings from 1000 to 10,000 kva. Mobile transformers have been built as large as 25,000 kva.

Recent activity indicates that many utilities have made considerable progress toward reducing maintenance costs through the development of systematic and mechanized approaches to over-all system maintenance. Rapid acceptance, for example, of mobile unit substations for normal equipment servicing, as well as for emergency service, on subtransmission systems has helped reduce routine expenditures on many systems. To further increase these savings by permitting mobile units to replace a greater number of substations, General Electric recently disclosed that it is extending the range of available ratings to 10,000 kva.

### PRODUCTIVE MAINTENANCE

Impetus may be added to the growing popularity of the "Productive Maintenance" concept, a program of sensibly scheduled equipment outages, by this extended range of mobile unit substations. Upkeep expense is reduced through the use of mobile

substations and mobile transformers as substitutes for regular units in need of service, thus permitting work to be done during regular working hours. Along with recent developments in automation and mechanization in the areas of generation, transmission and distribution, improvements in maintenance point up the utility industry's steady progress in reducing costs.

### EXPANSION AND CONTINUITY

As customer demands for more uniform service continue to grow and as systems continue to expand, utilities will find that often the problems can be eased greatly by sound maintenance planning. For further information on General Electric's mobile substations and how they can help streamline your company's approach to low-cost system maintenance, write for publication GEA-4415, General Electric Company, Schenectady 5, N.Y.

MORE POWER TO AMERICA

**GENERAL ELECTRIC**

